PSG

PHASE II SUBSURFACE INVESTIGATION REPORT

10-16 Beach 19th Street

10-16 Beach 19th Street
Queens, New York 11691

July 23, 2020
PSG Project Number: 20-286219.1

Prepared for:

Arden Group
61 East 11th Street, 5th Floor
New York, New York 10003

Engineers who understand your business

July 23, 2020

Jeremy Conway
Arden Group
61 East 11th Street, 5th Floor
New York, New York 10003

Subject: Phase II Subsurface Investigation Report
10-16 Beach 19th Street
Queens, New York 11691
PSG Project Number: 20-286219.1

Dear Mr. Conway:

PSG Engineering and Geology, D.P.C. (PSG) is pleased to provide the results of the assessment performed at the above-referenced property. The following report describes the field activities, methods, and findings of the Phase II Subsurface Investigation conducted at the above-referenced property.

This assessment was performed consistent with acceptable industry standards. The independent conclusions represent PSG's best professional judgment based upon existing conditions and the information and data available to us during the course of this assignment.

We appreciate the opportunity to provide these services. If you have any questions concerning this report, or if we can assist you in any other matter, please contact Charles Tallinger at (646) 794-5975.

Sincerely,

PSG Engineering and Geology, D.P.C.

DRAFT

Jonathan Lokko
Project Scientist

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Andres Simonson
Regional Manager - Subsurface Investigation

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Charles Tallinger
National Client Manager

Table of Contents

ATTACHMENTS

Tables
1. Summary of Investigation Scope
2. Soil Sample Laboratory Results Summary
3. Groundwater Sample Laboratory Results Summary
4. Sub-Slab Soil Gas Sample Laboratory Results Summary

1.0 INTRODUCTION

1.1 Purpose

The purpose of the investigation was evaluate the potential impact of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and/or metals to soil, groundwater, and/or soil gas as a consequence of a release or releases from the former and current subject property operations. Arden Group provided project authorization of PSG Proposal Number P20-286219.1.

1.2 Limitations

This report presents a summary of work conducted by PSG. The work includes observations of site conditions encountered and the analytical results provided by an independent third-party laboratory of samples collected during the course of the project. The number and location of samples were selected to provide the required information. It cannot be assumed that the limited available data are representative of subsurface conditions in areas not sampled.

Conclusions and/or recommendations are based on the observations, laboratory analyses, and the governing regulations. Conclusions and/or recommendations beyond those stated and reported herein should not be inferred from this document.

PSG warrants that the environmental consulting services contained herein were accomplished in accordance with generally-accepted practices in the environmental engineering, geology, and hydrogeology fields that existed at the time and location of work. No other warranties are implied or expressed.

1.3 User Reliance

PSG was engaged by Arden Group (the Addressee), or their authorized representative, to perform this investigation. The engagement agreement specifically states the scope and purpose of the investigation, as well as the contractual obligations and limitations of both parties. This report and the information therein, are for the exclusive use of the Addressee. This report has no other purpose and may not be relied upon, or used, by any other person or entity without the written consent of PSG. Third parties that obtain this report, or the information therein, shall have no rights of recourse or recovery against PSG, its officers, employees, vendors, successors or assigns. Any such unauthorized user shall be responsible to protect, indemnify and hold PSG, the Addressee and their respective officers, employees, vendors, successors and assigns harmless from any and all claims, damages, losses, liabilities, expenses (including reasonable attorneys' fees) and costs attributable to such use. Unauthorized use of this report shall constitute acceptance of, and commitment to, these responsibilities, which shall be irrevocable and shall apply regardless of the cause of action or legal theory pled or asserted.

This report has been completed under specific Terms and Conditions relating to scope, relying parties, limitations of liability, indemnification, dispute resolution, and other factors relevant to any reliance on this report. Any parties relying on this report do so having accepted PSG's standard Terms and Conditions, a copy of which can be found at http://www.partneresi.com/terms-and-conditions.php.

2.0 SITE BACKGROUND

2.1 Site Description

The 0.44-acre subject property consists of one parcel of land located on the east side of Beach 19th Street within a mixed residential, commercial, industrial area of Queens, Queens County, New York. The subject property is reportedly developed with a vacant one-story automotive repair shop. In addition to the structure, the subject property is improved with an asphalt parking area and a chain link fence and gate.

The subject property is bound by a three-story apartment building with a ground floor church to the north, two two-story buildings occupied as churches to the east, three one-story retail buildings to the south, and three two-story residential buildings and an undeveloped lot used to park vehicles to the west. Refer to Figure 1 for a site vicinity map showing site features and surrounding properties.

2.2 Site History

PSG was provided the September 30, 2019 *Phase I Environmental Site Assessment* report (Phase I) for the subject property, prepared by Velocity Consulting, Inc. (Velocity) on behalf of MTAG Services, LLC. According to Velocity, the subject property was occupied as a garage, an automotive repair shop, and/or a vehicle dismantling facility from circa 1933 to present. Sanborn maps showed two buried gasoline tanks inside the southwest corner of the garage building

The following recognized environmental conditions (RECs) were identified in the Phase I:

- Adjacent Sites – *Sanborn Fire Insurance maps (Sanborn maps) and the environmental regulatory databases show one adjacent site (18-48 Cornaga Avenue) with an open/active spill case, and three nearby sites (18-36 Cornaga Avenue, 19-01 to 19-03 Broadway, and 18-06 to 18-18 Cornaga Avenue/1803 to 18-17 Mott Avenue) that were occupied as gasoline stations and an auto repair shop since the 1930s. Given the proximity of these sites to the subject property, the open status of the spill case at the adjacent site, that the former nearby gasoline stations/auto repair shop began operations prior to regulatory oversight, and the general tendency of auto-related operations to negatively impact a nearby property via groundwater and soil vapor, the open spill case site and the former nearby gasoline stations and auto repair shop sites are a recognized environmental condition (REC) that is an issue of environmental concern and warrants further actions*.
- *Regulatory Review/Historical Review/USTs* [underground storage tanks] - *City directories, Sanborn maps, and the New York State Department of Environmental Conservation (NYSDEC) Landfill and/or Solid Waste Disposal Facilities (SWDF) Database show that the subject property was occupied as a garage, an auto repair shop, and a vehicle dismantling facility from circa 1933 to the present day. Sanborn maps show two buried gasoline tanks inside the southwest corner of the 1-story garage building. Fill ports and vent pipes were observed at this building, which also suggest the presence of buried tanks. No data regarding the gasoline tanks associated with this garage, including whether these tanks were removed and whether these tanks have impacted the subsurface, was available in the public records reviewed for this assessment. In addition, the auto repair shop and vehicle dismantling facility on-site operated during a time period that predates regulatory oversight regarding the storage, disposal, reporting, and cleanup of petroleum products, wastes, releases, and storage tanks. The lack of information regarding the buried gasoline tanks and the former auto repair/vehicle dismantling shop, the time period during which the former auto repair/ vehicle dismantling began operation (prior to regulatory oversight), and the general tendency of auto-related operations and buried gasoline tanks to negatively impact a property, make the former use and*

continued presence gasoline tanks a REC that is an issue of environmental concern, and warrants further actions.

According to Velocity's Phase I, the subject property is listed as an E-Designated site by the New York City Office of Environmental Remediation (OER). The E-designation is for "hazardous materials-Phase I & II testing protocol, and air quality."

2.3 Geology and Hydrogeology

Review of the United States Geological Survey (USGS) *Arthur Kill Jersey City/New York, New Jersey* Quadrangle topographic map, indicates the subject property is situated approximately 26 feet above mean sea level, and the local topography is relatively flat. Refer to Figure 2 for a topographic map of the site vicinity.

According to the United States Geological Survey (USGS) online geologic map website, the subject property is situated within the Monmouth group, Matawan group and Magothy formation (upper cretaceous) which consists primarily of silty clay, glauconitic sandy clay, sand and gravels.

Based on borings advanced during this investigation, the underlying subsurface consists predominantly of brown medium sand with gravel or brown silty sand with gravel and glass fragments from 0.5 feet below ground surface (bgs) to approximately 3 feet bgs. From 3 to 25 feet bgs, the subsurface consists predominantly of brown fine to medium sand with gravel. Groundwater was encountered during this investigation between 18 and 20 feet bgs. Refer to Appendix A for boring logs from this investigation.

3.0 FIELD ACTIVITIES

The Phase II Subsurface Investigation scope included a geophysical survey, the advancement of four borings (B-1 through B-4) to collect representative soil and/or groundwater, and the collection of four soil gas samples (SG-1 through SG-4). Refer to Table 1 for a summary of the borings, sampling schedule, and laboratory analyses for this investigation

3.1 Preparatory Activities

Prior to the initiation of fieldwork, PSG completed the following activities.

3.1.1 Utility Clearance

Coastal Environmental Solutions, Inc. (Coastal) of Bohemia, New York notified Dig Safely New York (Dig Safely) to clear public utility lines as required by law at least two business days prior to drilling activities. Dig Safely issued ticket number 201842369 for the project.

In addition, PSG subcontracted with Delta Geophysics, Inc. (Delta) of Catasauqua, Pennsylvania on July 9, 2020 to clear boring locations of utilities as discussed in Section 3.2

3.1.2 Health and Safety Plan

PSG prepared a site-specific Health and Safety Plan, which was reviewed with on-site personnel involved in the project prior to the commencement of drilling activities.

3.2 Geophysical Survey

On July 9, 2020, Delta conducted a geophysical survey under the direction of PSG. The purpose of the geophysical survey was to identify the location of former or existing USTs, and/or tankholds, piping, and/or associated features. Additionally, the geophysical survey was utilized to clear boring locations of utilities prior to drilling. The geophysical survey was performed using a Geophysical Survey Systems Inc. SIR-3000 cart-mounted Ground Penetrating Radar (GPR) unit with a 400 Mhz antenna, TW-6 Metallic Locator, and Radio detection RD7000 precision utility locator.

A closely-spaced rectilinear grid was established throughout the accessible interior areas (including partial basement) of the property and around proposed boring locations. The GPR investigation area was significantly limited due multiple areas of automobile repair parts and debris on the property. The grid was systematically traversed using electromagnetic induction (EM) equipment, GPR equipment, and/or utility tracers. The equipment data was interpreted in real time and compiled as necessary in order to identify subsurface anomalies consistent with utilities. The geophysical survey detected a metallic anomaly measuring approximately 10 feet by 6 feet indicative of a potential heating oil UST on the exterior northwestern portion of the subject property. Two other metallic anomalies indicative of potential gasoline USTs were detected in the abandoned automobile repair workshop at the western portion of the subject property (near the Sanborn depicted areas). The geophysical survey also detected a nonmetallic anomaly measuring approximately 10 feet by 6 feet on the exterior southwestern portion of the subject property. A former in-ground hydraulic lift was also detected in the active automobile repair workshop located at the northwestern portion of the subject property.

Several subsurface utilities including electric, natural gas, water, sanitary sewer, product piping, hydraulic lines, and unknown utilities were also detected on the subject property and the borings were placed accordingly to avoid conflicts.

Refer to Appendix B for a copy of the geophysical survey report, which provides additional details regarding the geophysical survey equipment and methodology.

3.3 Drilling Equipment

On July 9, 2020, four temporary sub-slab soil gas sample points (SG-1 through SG-4) were advanced by PSG using a power hand drill to facilitate the collection of sub-slab soil gas sample from beneath the subject property. On July 14, 2020, PSG subcontracted with Coastal to provide and operate drilling equipment. Coastal, under the direction of PSG, advanced four borings B-1 through B-4 with a track-mounted Geoprobe Model 6620DT direct push rig. Sampling equipment was decontaminated between sample intervals and boring locations to prevent cross-contamination.

3.4 Sample Locations

Boring B-1 was advanced at the exterior northwestern portion of property near the GPR detected heating oil UST anomaly. Boring B-2 was advanced at the interior northeastern portion of property (active automotive repair workshop) near a former in-ground hydraulic lift. Boring B-3 was advanced at the interior central portion of property (abandoned automotive repair workshop) in an area of floor staining and to provide general site characterization. Boring B-4 was advanced at the interior western portion of property (abandoned automotive repair workshop) near the GPR detected gasoline oil UST anomaly. Sub-slab soil gas samples SG-1 and SG-2 were installed adjacent to borings B-4 and B-3, respectively. Sub-slab soil gas samples SG-3 and SG-4 were collected respectively at the interior central and western portions of property (abandoned automotive repair workshop). Refer to Figure 3 for a map indicating sample locations.

3.5 Soil Sampling

Borings B-1 through B-4 were each advanced by the direct-push drill rig to a terminal depth of 25 feet bgs. Soil borings B-1 through B-4 were each advanced using a 5-foot long by 2-inch diameter MacroCore sampler with a 5-foot long acetate liner, which was advanced by the direct-push drill rig using 5-foot long by 1.5-inch diameter drill rods. The samplers were driven into the subsurface to allow undisturbed soil to enter the open MacroCore barrel and retrieved to recover the soil-filled liners. A lengthwise section of each acetate liner was removed with a splitting tool to expose the soil and the samples were collected. The soil column at each boring was visually inspected for discoloration, monitored for odors, and classified in accordance with the Unified Soil Classification System (USCS). Additionally, the soil column was field-screened with a photoionization detector (PID) calibrated to 100 parts per million (ppm) isobutylene.

Potential olfactory evidence of impacted conditions (slight petroleum-like odors) was noticed in boring B-1. PID readings on the soil profile screened from boring B-1 ranged from 14.1 ppm to 44.2 ppm. No visual or olfactory evidence of impacted conditions were detected in borings B-2 through B-4. PID readings on the soil profile screened from borings B-2 through B-4 ranged from 0.1 ppm to 28.1 ppm. Soil samples were collected from the interval directly at the highest observed PID readings above the groundwater interface. Specifically, soil samples B-1 through B-4 were collected respectively from the depth intervals 18-19 feet

bgs, 14-15 feet bgs, 2-3 feet bgs, and 16-17 feet bgs being the interval at the highest PID recorded. The sample depth for B-3 also corresponded with the interval of historic fill material.

Soil depths selected for laboratory analysis were sampled directly from the liners using a disposable plastic syringe and retained in two sodium bisulfate-preserved and one methanol volatile organics analysis (VOA) vials in accordance with United States Environmental Protection Agency (EPA) Method 5035 sampling protocol. A soil sample was also collected by transferring soil into a laboratory-supplied, 4-ounce, wide-mouth, unpreserved glass jars, which were sealed with a threaded, Teflon-lined lid for SVOCs, PCBs, pesticides, and metal analysis. The jars were filled with soil to capacity to minimize headspace and reduce the potential for volatilization. The jars and VOA vials were labeled for identification and stored in an iced-cooler.

3.6 Groundwater Sampling

Groundwater was encountered in the borings B-1 through B-4 advanced during this investigation at depths ranging 19 feet to 20 feet bgs. After soil sampling to the terminal depth, a groundwater sample was collected from boring locations B-1 through B-4 using a five-foot stainless-steel Geoprobe Screen Point (SP) 22 Groundwater Sampler. Once the 2.25-inch outer casing was removed from the borehole, the SP22 Groundwater Sampler was inserted into the open borehole using 1.25-inch OD center rods and screened from approximately 20 to 25 feet bgs in borings B-1 through B-4. A section of 0.375-inch polyethylene tubing equipped with a stainless-steel check valve at the terminal end was lowered through the center of the 1.25-inch drill rods to allow for groundwater sample collection.

Groundwater samples were retrieved from boring locations using a new section of 0.375-inch diameter polyethylene tubing with a stainless-steel check valve at the terminal end and conveyed into three hydrochloric acid-preserved VOA vials for submittal of samples for VOC analysis via EPA Method 8260 and into 250-milliliter unpreserved amber glass jars for submittal of samples for SVOCs, PCBs and pesticides , 250-milliliter unpreserved and nitric acid preserved plastic jars for submittal of samples for metals (total and dissolved). Each vial and jar were filled with no observable headspace or air bubbles to minimize the potential for volatilization, labeled for identification and stored in an iced-cooler.

Dedicated sections of tubing were used for the sampling of the temporary groundwater sampling points, as described above. The SP22 sampler screen, drilling rods, and stainless-steel check valve were decontaminated between boring locations to prevent cross-contamination.

3.7 Sub-Slab Soil Gas Sampling

To facilitate the collection of sub-slab soil gas samples from beneath the subject property, temporary sub-slab soil gas sample points SG-1 through SG-4 were advanced using a power hand drill through the floor slab. Sub-slab soil gas samples SG-1 through SG-4 were each collected from a temporary soil gas point,. consisting of a pre-fabricated stainless-steel Vapor Pin™ equipped with a silicone sleeve, was manually inserted into a $^{5}/_{8}$-inch diameter hole drilled through the concrete slab of the subject property building using a rotary hammer drill. After installing the Vapor Pin™ a protective cap was placed over the barbed sampling end of the Vapor Pin™ and a water dam was installed around the Vapor Pin™ to further ensure that an airtight seal was present around the sampling point. Once the airtight seal was confirmed, the water dam was removed and the sample tubing and the Vapor Pin™ was purged of ambient air using a PID. The sampling end of the tubing was initially connected to a PID to field screen the soil-gas conditions relating

to VOCs and to purge the sample point. The soil-gas sample points were each purged for approximately two minutes. The PID readings ranged from 0.4 ppm to 2.9 ppm. Prior to purging, ambient air quality was monitored at the subject property and PID background reading was 0.3 ppm. After the ambient air was purged from the sample tubing and Vapor Pin™, a connection was made with new Teflon tubing and a laboratory-supplied certified clean 2.7-liter SUMMA™ Canisters.

The sub-slab soil gas sample was collected using a SUMMA™ canister provided by Alpha Analytical Laboratories (Alpha), of Westborough, Massachusetts, a state-certified laboratory [NYSDEC Environmental Laboratory Accreditation Program (ELAP) certificate number 11148] which subjected the canisters to a rigorous cleaning process using a combination of dilution, heat, and high vacuum. After cleaning, the canisters were batch certified to be free of target contaminants to a specified reporting limit via gas chromatography/mass spectroscopy prior to delivery. PSG received the SUMMA™ canister evacuated to approximately 29.4 inches of mercury. The SUMMA™ canister was fitted with a stainless-steel flow controller, which Alpha calibrated to maintain constant flow for approximately 10 minutes of sampling time.

The sampling end of the tubing was fitted to the sampling canister and the valve was opened, causing air to enter the SUMMA™ canister due to the pressure differential. PSG closed the valve after the canister was evacuated to approximately 0.10 to 0.95 inches of mercury and after the 10 minutes duration, with pertinent data (e.g., time, canister vacuum) recorded at the start and end of sampling. The SUMMA™ canisters were labeled for identification and stored away from direct sunlight prior to analysis. Upon completion of the remaining soil gas sampling procedures, the Vapor Pins™ were removed from the concrete slab

3.8 Post-Sampling Activities

Probes/temporary well points/soil gas points s were removed from the subsurface and the boreholes were backfilled with hydrated bentonite chips following sampling activities. Boreholes advanced in improved areas were capped with concrete or asphalt patch to match existing ground cover after being backfilled.

No significant amounts of derived wastes were generated during this investigation.

4.0 DATA ANALYSIS

4.1 Laboratory Analysis

PSG collected four sub-slab soil gas samples (SG-1 through SG-4) on July 9, 2020, and four soil samples (B-1 through B-4) and four groundwater samples (B-1GW through B-4GW) on July 14, 2020, which were transported under chain-of-custody protocol to Alpha, a state-certified laboratory [Environmental Laboratory Accreditation Program (ELAP) certificate number 11148] in the Towns of Westborough (soil and groundwater) and Mansfield (soil gas), Massachusetts for analysis. The soil and groundwater samples were analyzed for VOCs via EPA Method 8260, SVOCs via EPA Method 8270, pesticides via EPA Method 8081, PCBs via EPA Method 8082, and target analyte list (TAL) metals via EPA Method 6010 and 7471. The groundwater metals analysis included both *total* and *dissolved* TAL metals. The soil gas samples were analyzed for VOCs in accordance with EPA Method TO-15.

Laboratory analytical results are included in Appendix C and discussed below

4.2 Regulatory Agency Comparison Criteria

4.2.1 Soils

The soil sample analytical results were compared to NYSDEC Unrestricted Use Soil Cleanup Objectives (SCOs), which represents the most stringent NYSDEC criteria and includes all direct contact, ecological, and impact to groundwater pathways. The soil results were further compared to groundwater protection SCOs and commercial direct contact SCOs (current use).

4.2.2 Groundwater

The groundwater analytical results were compared to the NYSDEC New York Technical & Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS).

4.2.3 Soil Gas

The EPA Office of Land and Emergency Management (OLEM) issued the guidance document *"Office of Solid Waste and Emergency Response (OSWER) Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air"*, dated June 2015, to specifically address the "vapor intrusion pathway." The intent of this guidance document is to provide a tool to help the user conduct a screening evaluation as to whether the vapor intrusion exposure pathway to indoor air is complete and, if so, whether it poses an unacceptable risk to human health. The EPA recommends using an individual lifetime cancer risk of 10^{-6} as a point of departure for establishing cleanup levels based upon potential cancer effects.

Given the commercial development of the subject property, the sub-slab soil gas samples analyzed during this investigation were compared to the EPA Calculated 10^{-6} Target Soil Gas Concentrations for Carcinogens in the Commercial Exposure Scenario, which represents the most stringent Vapor Intrusion Screening Levels (VISLs) applicable to the subject property use; the EPA Calculated 10^{-5} Target Soil Gas Concentrations for Carcinogens in the Commercial Exposure Scenario, which represents the EPA's recommended VISLs for the vapor intrusion pathway applicable to the subject property use; and to the EPA Calculated 10^{-4} Target Soil Gas Concentrations for Carcinogens in the Commercial Exposure Scenario, which represents the least

stringent VISLs applicable to the subject property use. Exceedance of the 10^{-4} criteria typically indicates the need for remedial action

Further, as multiple VOCs were identified and may be present in the soil gas samples, a Target Hazard Quotient of 0.1 was utilized to calculate the VISLs due to the potential for cumulative health effects. The criteria were produced by accessing the EPA Vapor Intrusion Screening Calculator (https://epa-visl.ornl.gov/cgi-bin/visl_search). Refer to Appendix D for the EPA Calculated VISLs.

4.3 Soil Sample Data Analysis

As shown in Table 2, seven VOC analytes were detected at concentrations above the laboratory method detection limits (MDLs)/reporting limits (RLs) in the soil samples collected from borings B-1 through B-4. Of the detected VOCs, acetone in B-1 was detected at a concentration of 0.11 milligrams per kilogram (mg/kg) which exceeds NYSDEC Unrestricted Use and Groundwater Protection SCOs but was below the applicable Commercial direct contact SCOs.

Six SVOC analytes were detected at concentrations above the laboratory MDLs/RLs but below the most stringent NYSDEC Unrestricted Use SCOs in the soil samples collected from borings B-1 through B-4.

No pesticides were detected at concentrations above the laboratory MDLs/RLs in the soil samples collected from borings B-1 through B-4. One PCB analyte was detected at a concentration above the laboratory MDLs/RLs but below the most stringent NYSDEC Unrestricted Use SCO in the soil sample collected from boring B-2.

Nineteen metal analytes were detected at concentrations above the laboratory MDLs/RLs in the soil samples collected from borings B-1 through B-4. Of the detected metals, lead and mercury were detected in soil sample B-2 at respective concentrations of 168 mg/kg and 0.284 mg/kg which exceed NYSDEC Unrestricted Use SCOs but were below the Groundwater Protection SCOs and the applicable Commercial direct contact SCOs criteria.

4.4 Groundwater Sample Data Analysis

As shown in Table 3, eleven VOC analytes were detected at concentrations above the laboratory MDLs/RLs in the groundwater samples B-1GW through B-4GW. Of the detected VOCs, 1,2,4,5-tetramethylbenzene, chloroform, n-butylbenzene and sec-butylbenzene were detected in groundwater sample B-1GW at respective concentrations of 14 micrograms per liter (µg/l), 22 µg/l, 12 µg/l, and 8.6 µg/l which exceed their applicable NYSDEC AWQS. 1,2,4,5-tetramethylbenzene and sec-butylbenzene were detected in groundwater sample B-2GW at respective concentrations of 17 µg/l and 15 µg/l which exceed their applicable NYSDEC AWQS. The remaining VOCs were not detected at concentrations above their applicable NYSDEC AWQS.

Eighteen SVOC analytes were detected at concentrations above the laboratory MDLs/RLs in the groundwater samples B-1GW through B-4GW. Of the detected SVOCs, chrysene was detected in groundwater sample B-1GW at an estimated concentration of 0.02 µg/l which exceeds its applicable NYSDEC AWQS. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(ghi)perylene, benzo(k)fluoranthene, chrysene and indeno(1,2,3-cd)pyrene were detected in groundwater sample B-2GW at respective estimated concentrations of 0.05 µg/l, 0.04 µg/l, 0.06 µg/l, 0.02 µg/l, 0.06 µg/l and 0.02 µg/l which exceed their applicable NYSDEC AWQS. Chrysene was detected in groundwater sample B-3GW at an

estimated concentration of 0.01 µg/l which exceeds its applicable NYSDEC AWQS. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(ghi)perylene, benzo(k)fluoranthene, chrysene and indeno(1,2,3-cd)pyrene were detected in groundwater sample B-4GW at respective estimated concentrations of 0.02 µg/l, 0.04 µg/l, 0.06 µg/l, 0.03 µg/l, 0.03 µg/l and 0.03 µg/l which exceed their applicable NYSDEC AWQS. The remaining SVOCs were not detected at concentrations above their applicable NYSDEC AWQS.

Pesticides and PCBs were not detected at concentrations above the laboratory MDLs/RLs in the groundwater samples B-1GW through B-4GW.

Twenty-three total metal analytes were detected at concentrations above the laboratory MDLs/RLs in groundwater samples B-1GW through B-4GW. Sixteen dissolved metal analytes were however detected at concentrations above the laboratory MDLs/RLs in groundwater samples B-1GW through B-4GW. Of the detected metals in the groundwater samples, ten total metals were detected at concentrations exceeding their applicable NYSDEC AWQS. Analytical results of dissolved metals in the groundwater samples indicated that iron was detected in B-1GW through B-4GW at respective concentrations of 13,000 µg/l, 1,530 µg/l, 5,370 µg/l, and 3,000 µg/l which are above the corresponding NYSDEC AWQS of 300 µg/l. Dissolved manganese was detected in B-2GW through B-4GW at respective concentrations of 618.6 µg/l, 876.4 µg/l and 732.8 µg/l which are above their corresponding NYSDEC AWQS of 300 µg/l. Dissolved sodium was detected in B-3GW and B-4GW at respective concentrations of 77,600 µg/l and 215,000 µg/l which are above their corresponding NYSDEC AWQS of 20,000 µg/l.

4.5 Sub-Slab Soil Gas Sample Data Analysis

4.5.1 EPA VISLs

As shown in Table 4, twenty-three VOC analytes were detected at concentrations above the laboratory RLs. Of the detected VOCs, PCE was detected at concentrations above the 10^{-6}, 10^{-5}, and 10^{-4} Target Soil Gas Concentrations for Carcinogens for the Commercial Exposure Scenario in sub-slab soil gas samples SG-1[1670 micrograms per cubic meter (µg/m^3)], SG-2 (4,360 µg/m^3) and SG-3 (949 µg/m^3).

4.5.2 NYSDOH Decision Matrices

NYSDOH Decision Matrix A

The NYSDOH Soil Vapor/Indoor Air Matrix A (May 2017), a copy of which is provided as Appendix E, was designed to compare trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethene (1,1-DCE), and carbon tetrachloride sub-slab analytical results with their respective indoor air analytical results, and by extension, to determine the necessity for mitigation. Indoor air samples were not collected during this investigation.

As shown in Table 4, TCE was detected in soil gas sample SG-1 (6.5 µg/m^3). When entering the highest TCE concentration detected in soil gas sample SG-1 into Matrix A in the sub-slab soil gas sample entry row "6 to <6 µg/m^3", the matrix returns a value of either "no further action" or "monitor" or "mitigate" depending on the indoor air concentration of TCE.

The following table compares the highest TCE concentration detected during this investigation to the applicable NYSDOH Matrix A guidance recommendations (highlighted in yellow):

Matrix A - TCE		**Indoor Air = Not Sampled**		
		< 0.2	0.2 to < 1	1 and above
Soil Gas SG-1 = 6.5 µg/m3	< 6	No further action	No further action	Identify source(s) and resample or mitigate
	6 to < 60	**No further action**	**Monitor**	**Mitigate**
	60 and above	Mitigate	Mitigate	Mitigate

Cis-1,2-DCE, 1,1-DCE, and carbon tetrachloride were not detected at concentrations above the laboratory RLs in the soil gas samples SG-1 through SG-4. Based on this information, no further investigation/mitigation appears to be warranted regarding cis-1,2-DCE, 1,1-DCE, and carbon tetrachloride

NYSDOH Decision Matrix B

The NYSDOH Soil Vapor/Indoor Air Matrix B (May 2017), a copy of which is provided as Appendix E, was designed to compare tetrachloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), and methylene chloride sub-slab analytical results with their respective indoor air analytical results, and by extension, to determine the necessity for mitigation. Indoor air samples were not collected during this investigation.

As shown in Table 4, PCE was detected in soil gas samples SG-1 (1,670 µg/m^3), SG-2 (4,360 µg/m^3) and SG-3 (949 µg/m^3). When entering the highest PCE concentration detected in sub-slab soil gas sample SG-2 into Matrix B in the sub-slab soil gas sample entry row "1,000 µg/m^3 and above", the matrix returns a value of "mitigate" regardless of the indoor air concentration of PCE. Indoor air samples were not collected as a part of this investigation. Additionally, PCE was identified above the 10^{-6}, 10^{-5}, and 10^{-4} Target Soil Gas Concentrations for Carcinogens for the Commercial Exposure Scenario in sub-slab soil gas samples SG-1, SG-2 and SG-3. Based on this information, further investigation and/or confirmatory sampling is required to evaluate whether mitigation of PCE is necessary, to prevent vapor intrusion of PCE to indoor air.

The following table compares the highest PCE concentration detected during this investigation to the applicable NYSDOH Matrix B guidance recommendations (highlighted in yellow):

Matrix B - PCE		Indoor Air = Not Sampled		
		< 3	3 to < 10	10 and above
Soil Gas SG-2 = 4360 µg/m3	< 100	No further action	No further action	Identify source(s) and resample or mitigate
	100 to < 1,000	No further action	Monitor	Mitigate
	1,000 and above	**Mitigate**	**Mitigate**	**Mitigate**

As shown in Table 4, 1,1,1-TCA was detected in sub-slab soil gas sample SG-4 (1.19 µg/m^3). When entering the highest 1,1,1-TCA concentration detected in sub-slab soil gas samples into Matrix B in the sub-slab soil gas sample entry row "<100 µg/m^3," the matrix returns a value of either "no further action" or "identify source(s) and resample or mitigate" depending on the indoor air concentrations of identify source(s) and resample or mitigate.

The following table compares the highest 1,1,1-TCA concentration detected during this investigation to the applicable NYSDOH Matrix B guidance recommendations (highlighted in yellow):

Matrix B - 1,1,1-TCA		Indoor Air = Not Sampled		
		< 3	3 to < 10	10 and above
Soil Gas SG-4 =1.19 µg/m3	< 100	**No further action**	**No further action**	**Identify source(s) and resample or mitigate**
	100 to < 1,000	No further action	Monitor	Mitigate
	1,000 and above	Mitigate	Mitigate	Mitigate

Methylene chloride was not detected at a concentration above the laboratory RLs in soil gas samples SG-1 through SG-4. Based on this information, no further investigation/mitigation appears to be warranted regarding methylene chloride.

NYSDOH Decision Matrix C

The NYSDOH Soil Vapor/Indoor Air Matrix C (May 2017), a copy of which is provided as Appendix D, was designed to compare vinyl chloride sub-slab analytical results with their respective indoor air analytical results, and by extension, to determine the necessity for mitigation. Indoor air samples were not collected

during this investigation Vinyl chloride was not detected at concentrations above the laboratory RLs in soil gas samples SG-1 through SG-4. Based on this information, no further investigation/mitigation appears to be warranted regarding vinyl chloride.

4.6 Discussion

Soil

Based on the analytical soil results, no soil direct-contact exceedances were identified for the applicable commercial use.

Groundwater

Based on the groundwater analytical results, the groundwater at the subject property is impacted with petroleum related VOCs, SVOCs, and metals. However, groundwater at the subject property is not used as a drinking water source. Further, no discernable soil source of the groundwater exceedances was encountered, indicating likely diffuse urban groundwater impacts.

Sub-Slab Soil Gas

Based on the analytical results of the soil gas samples compared to EPA criteria, there is evidence of PCE impacts in soil gas below the subject property. Further, comparison of the PCE concentrations detected in soil gas samples SG-1 through SG-3 to the NYSDOH Decision Matrices indicates the need for additional investigation and/ mitigation of PCE impacts.

However, Partner understands that the proposed redevelopment of the subject property will include the excavation of the site to at least one level below grade and will include a vapor barrier (or other vapor mitigation system as directed by OER). Based upon this proposed redevelopment PSG does not expect the findings of this report to have any material impact on the redevelopment schedule and recommends that the findings of this assessment be presented to OER and that any additional investigation and/or remediation be conducted at their direction.

5.0 SUMMARY AND CONCLUSIONS

PSG conducted a Phase II Subsurface Investigation at the subject property to evaluate the potential impact of VOCs, SVOCs, PCBs, pesticides, and/or metals to soil, groundwater, and/or soil gas as a consequence of a release or releases from the former and current subject property operations. PSG understands the subject property is subject to a New York City E-Designation, and therefore, redevelopment at the subject property will be conducted under New York City OER oversight.

The scope of the Phase II Subsurface Investigation included a geophysical survey, the advancement of four borings (B-1 through B-4) to collect representative soil and groundwater samples, and the collection of four soil gas samples (SG-1 through SG-4).

Four borings B-1 through B-4 were advanced on the subject property. Groundwater was encountered in the borings during this investigation between 19 and 20 feet bgs.

The soil and groundwater samples were analyzed for VOCs, SVOCs, pesticides, PCBs, and TAL metals. The groundwater metals samples were analyzed both *total* and *dissolved* metals. The soil gas samples were analyzed for VOCs.

The analytical soil results indicate no soil direct-contact exceedances.

Based on the groundwater analytical results, the groundwater at the subject property is impacted with VOCs, SVOCs, and metals. However, the groundwater at the subject property is not used as a drinking water source. Further, no discernable soil source of the groundwater exceedances was encountered, indicating likely diffuse urban groundwater impacts.

Based on the analytical results of the soil gas samples compared to EPA criteria and NYSDOH matrices, there is evidence of PCE impacts in soil gas below the subject property. However, Partner understands that the proposed redevelopment of the subject property will include the excavation of the site to at least one level below grade and will include a vapor barrier (or other vapor mitigation system as directed by OER). Based upon this proposed redevelopment PSG does not expect the findings of this report to have any material impact on the redevelopment schedule and recommends that the findings of this assessment be presented to OER and that any additional investigation and/or remediation be conducted at their direction.

TABLES

PSG

Table 1 : Summary of Investigation Scope
10-16 Beach 19th Street
Queens, New York 11691
PSG Project Number 20-286219.1
July 7 and 14, 2020

Borehole Identification	Location	Terminal Depth (feet bgs)	Sample Identification	Matrix Sampled	Sampling Depths (feet bgs)	Target Contaminants
B-1	Exterior northwestern portion of property near GPR detected heating oil UST anomaly	25.0	B-1	Soil	18.0-19.0	VOCs (8260), SVOCs (8270), PCBs (8082), Pesticides (8081), TAL Metals (60107471)
			B-1GW	Groundwater	20.0-25.0	
B-2	Interior northeastern portion of property (active automotive repair workshop) near a former in-ground hydraulic lift	25.0	B-2	Soil	14.0-15.0	VOCs (8260), SVOCs (8270), PCBs (8082), Pesticides (8081), TAL Metals (60107471)
			B-2GW	Groundwater	20.0-25.0	
B-3	Interior central portion of property (abandoned automotive repair workshop) in an area of floor staining	25.0	B-3	Soil	2.0-3.0	VOCs (8260), SVOCs (8270), PCBs (8082), Pesticides (8081), TAL Metals (60107471)
			B-3GW	Groundwater	20.0-25.0	
B-4	Interior western portion of property (abandoned automotive repair workshop) near GPR detected gasoline oil UST anomaly	25.0	B-4	Soil	16.0-17.0	VOCs (8260), SVOCs (8270), PCBs (8082), Pesticides (8081), TAL Metals (60107471)
			B-4GW	Groundwater	20.0-25.0	
SG-1	Adjacent to boring B-4	1.0	SG-1	Sub-slab Soil gas	0.5 - 1.0	VOCs (TO-15)
SG-2	Adjacent to boring B-3	1.0	SG-2	Sub-slab Soil gas	0.5 - 1.0	VOCs (TO-15)
SG-3	Interior central portion of property (abandoned automotive repair workshop)	1.0	SG-3	Sub-slab Soil gas	0.5 - 1.0	VOCs (TO-15)
SG-4	Interior western portion of property (abandoned automotive repair workshop)	1.0	SG-4	Sub-slab Soil gas	0.5 - 1.0	VOCs (TO-15)

Notes:
VOCs (8260)= Volatile organic compounds in accordance with United States Environmental Protection Agency (EPA) method 8260
SVOCs (8270)= Semi-volatile organic compounds in accordance with United States Environmental Protection Agency (EPA) method 8270
PCBs = Polychlorinated biphenyls
TAL = Target analyte list
bgs = Below ground surface
GPR = Ground penetrating radar
UST = Underground storage tank

Table 2 : Soil Sample Laboratory Results Summary
10-16 Beach 19th Street
Queens, New York 11691
PSG Project Number 20-286219.1
July 14, 2020

ANALYTE	SCO Unrestricted	SCO Groundwater Protection	SCO Commercial	B-1	B-2	B-3	B-4
Sampling Depth (feet bgs)				18.0-19.0	14.0-15.0	2.0-3.0	16.0-17.0
VOCs via 8260 (mg/kg)							
1,2,4,5-Tetramethylbenzene	NE	NE	NE	0.0027	<0.002	<0.0022	<0.0021
Acetone	0.05	0.05	500	0.11	0.013	0.012	0.016
Bromomethane	NE	NE	NE	<0.0019	0.00073J	0.00076J	<0.0021
n-Butylbenzene	12	12	500	0.0028	<0.001	<0.0011	<0.001
p-Isopropyltoluene	NE	NE	NE	0.0004J	<0.001	<0.0011	<0.001
sec-Butylbenzene	11	11	500	0.0014	<0.001	<0.0011	<0.001
Tetrachloroethene	1.3	1.3	150	0.00051	0.0008	0.011	<0.00053
SVOCs via 8270 (mg/kg)							
Anthracene	100	1000	500	0.091J	<0.1	<0.1	<0.1
Bis(2-ethylhexyl)phthalate	NE	NE	NE	<0.17	0.088J	<0.18	<0.17
Fluoranthene	100	1000	500	0.038J	<0.1	<0.1	<0.1
Naphthalene	12	12	500	0.029J	<0.17	<0.18	<0.17
Phenanthrene	100	1000	500	0.12	<0.1	<0.1	<0.1
Pyrene	100	1000	500	0.2	<0.1	0.017J	<0.1
Pesticides via 8081 (mg/kg)							
Pesticides not detected							
PCBs via 8082 (mg/kg)							
Aroclor 1248	0.1	3.2	1	<0.0336	0.00652J	<0.0339	<0.0331
Metals via 6010/7471 (mg/kg)							
Aluminum, Total	NE	NE	NE	925	4530	2730	648
Antimony, Total	NE	NE	NE	<4.04	0.598J	<4.18	<3.95
Arsenic, Total	13	16	16	1.16	3.59	1.31	1.19
Barium, Total	350	820	400	4.07	34.9	7.27	2.44
Beryllium, Total	7.2	47	590	0.04J	0.105J	0.05J	0.032J
Calcium, Total	NE	NE	NE	387	787	289	28.1
Chromium, Total	NE	NE	NE	25.9	10.3	4.19	6.45
Cobalt, Total	NE	NE	NE	0.752J	1.46J	0.895J	0.467J
Copper, Total	50	1720	270	3.32	7.09	2.46	1.38
Iron, Total	NE	NE	NE	3590	10800	4790	1730
Lead, Total	63	450	1000	3.8J	168	11.7	0.506J
Magnesium, Total	NE	NE	NE	162	299	148	43.1
Manganese, Total	1600	2000	10000	23.6	48.4	30.3	12
Mercury, Total	0.18	0.73	2.8	<0.066	0.284	<0.067	<0.064
Nickel, Total	30	130	310	3.16	3.4	1.8J	0.941J
Potassium, Total	NE	NE	NE	106J	178J	96.4J	49.9J
Sodium, Total	NE	NE	NE	16J	47.4J	16.1J	12.6J
Vanadium, Total	NE	NE	NE	4.04	14.6	6.35	2.49
Zinc, Total	109	2480	10000	4.39	89	6.38	1.17J

Notes
SCO Unrestricted = New York Department of Environmental Conservation (NYSDEC) Soil Cleanup Objective(SCO) for Unrestricted Use
SCO Groundwater Protection = NYSDEC Protection of Groundwater Use Soil Cleanup Objective
SCO Commercial = NYSDEC Soil Cleanup Objective for Commercial Use
VOCs = Volatile Organic Compounds in accordance with Environmental Protection Agency (EPA) method 8260
SVOCs = Semi-Volatile Organic Compounds in accordance with EPA method 8270
PCBs = Polychlorinated biphenyls in accordance with EPA method 8082
mg/kg = milligram per kilogram
< = not detected above indicated laboratory method detection limit (MDL)
J = Estimated value. The target analyte concentration detected below laboratory quantitation limit
bgs = below ground surface
NE = Not Established
Exceeds standard

Table 3 : Groundwater Sample Laboratory Results Summary
10-16 Beach 19th Street
Queens, New York 11691
PSG Project Number 20-286219.1
July 14, 2020

ANALYTE	NY-AWQS	B-1GW	B-2GW	B-3GW	B-4GW
VOCs via EPA method 8260 (µg/l)					
1,2,4,5-Tetramethylbenzene	5	14	17	<2	<2
Acetone	50	10	4.8J	12	7.4
Carbon disulfide	60	2.3J	<5	<5	<5
Chloroform	7	22	<2.5	<2.5	0.71J
n-Butylbenzene	5	12	2.3J	<2.5	<2.5
n-Propylbenzene	5	<2.5	1.5J	<2.5	<2.5
p-Diethylbenzene	NE	60	14	<2	<2
p-Isopropyltoluene	5	2.4J	1.1J	<2.5	<2.5
sec-Butylbenzene	5	8.6	15	0.74J	1.3J
Tetrachloroethene	5	1.2	0.76	1.7	2.3
Trichloroethene	5	<0.5	<0.5	<0.5	0.25J
SVOCs via EPA method 8270 (µg/l)					
Di-n-butylphthalate	50	7.1	2.1J	0.4J	0.56J
Diethyl phthalate	50	<5	1.3J	<5	<5
Acenaphthene	20	0.06J	0.04J	<0.1	<0.1
Acenaphthylene	NE	0.05J	0.04J	<0.1	0.01J
Anthracene	50	0.13	<0.1	0.08J	0.03J
Benzo(a)anthracene	0.002	<0.1	0.05J	<0.1	0.02J
Benzo(a)pyrene	0.002	<0.1	0.04J	<0.1	0.04J
Benzo(b)fluoranthene	0.002	<0.1	0.06J	<0.1	0.06J
Benzo(ghi)perylene	NE	<0.1	0.08J	<0.1	0.04J
Benzo(k)fluoranthene	0.002	<0.1	0.02J	<0.1	0.03J
Chrysene	0.002	0.02J	0.06J	0.01J	0.03J
Fluoranthene	50	0.04J	0.11	0.1	0.05J
Fluorene	50	0.09J	0.2	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	0.002	<0.1	0.02J	<0.1	0.03J
Naphthalene	10	1.3	0.79	0.16	<0.1
Pentachlorophenol	1	<0.8	<0.8	0.32J	<0.8
Phenanthrene	50	0.62	0.35	0.19	0.04J
Pyrene	50	0.11	0.45	0.22	0.14
Pesticides via EPA method 8081 (µg/l)					
Pesticides not detected					
PCBs via EPA method 8082 (µg/l)					
PCBs not detected					

Notes:

NY-AWQS=New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
VOCs = Volatile Organic Compounds in accordance with Environmental Protection Agency (EPA) method 8260
SVOCs = Semi-Volatile Organic Compounds in accordance with EPA method 8270
PCBs = Polychlorinated biphenyls in accordance with EPA method 8082
NE = Not Established
EPA = United States Environmental Protection Agency
µg/l = micrograms per liter
J = Estimated value. The target analyte concentration detected below laboratory quantitation limit
< = not detected above indicated laboratory reporting limit (RL)
Exceeds standard
Laboratory method detection limit (MDL)/reporting limit (RL) exceeds or equal to New York Criteria

Table 3 : Groundwater Sample Laboratory Results Summary
10-16 Beach 19th Street
Queens, New York 11691
PSG Project Number 20-286219.1
July 14, 2020

ANALYTE	NY-AWQS	B-1GW	B-2GW	B-3GW	B-4GW
Total Metals via EPA method 6010/7471 (µg/l)					
Aluminum, Total	NE	24400	73800	32800	35800
Antimony, Total	3	0.87J	0.71J	0.6J	0.43J
Arsenic, Total	25	22.21	27.71	18.94	18.2
Barium, Total	1000	639	397.4	317.5	416.4
Beryllium, Total	3	5.24	12.3	6.37	5.6
Cadmium, Total	5	0.74	2.88	0.58	0.66
Calcium, Total	NE	14300	44400	73000	78200
Chromium, Total	50	1605	865.9	493.3	528.2
Cobalt, Total	NE	39.73	250.1	81.47	106.6
Copper, Total	200	74.2	197.2	143.2	158.3
Iron, Total	300	150000	227000	128000	131000
Lead, Total	25	672.5	462.1	588.6	463.1
Magnesium, Total	35000	2920	6260	7960	6590
Manganese, Total	300	864.9	3548	1619	1739
Mercury, Total	0.7	1.24	2.36	0.52	0.66
Nickel, Total	100	186.7	624.6	105.5	94.7
Potassium, Total	NE	4400	5000	7920	13300
Selenium, Total	10	16.2	27.5	20.6	22.6
Silver, Total	50	<0.4	0.21J	<0.4	<0.4
Sodium, Total	20000	15000	4520	77700	207000
Thallium, Total	0.5	0.38J	0.89	0.49J	0.53
Vanadium, Total	NE	168.2	206.3	91.84	91.14
Zinc, Total	2000	165.9	1088	113.6	210.3
Dissolved Metals via EPA method 6010/7471 (µg/l)					
Aluminum, Dissolved	NE	23	3.49J	<10	260
Antimony, Dissolved	3	0.68J	<4	0.89J	<4
Arsenic, Dissolved	25	1.27	0.68	0.25J	0.52
Barium, Dissolved	1000	43.75	5.82	24.19	30.31
Beryllium, Dissolved	3	<0.5	<0.5	<0.5	<0.5
Cadmium, Dissolved	5	<0.2	<0.2	<0.2	<0.2
Calcium, Dissolved	NE	9030	28300	65800	68900
Chromium, Dissolved	50	<1	<1	<1	0.73J
Cobalt, Dissolved	NE	4.91	5.06	32.94	30.54
Copper, Dissolved	200	<1	<1	0.52J	0.56J
Iron, Dissolved	300	13000	1530	5370	3000
Lead, Dissolved	25	5.08	<1	<1	0.73J
Magnesium, Dissolved	35000	1160	2390	6200	4400
Manganese, Dissolved	300	289	618.6	876.4	732.8
Mercury, Dissolved	0.7	<0.2	<0.2	<0.2	<0.2
Nickel, Dissolved	100	13.73	4.37	17.09	11.7
Potassium, Dissolved	NE	2280	2300	6040	11100
Selenium, Dissolved	10	<5	<5	<5	3.03J
Silver, Dissolved	50	<0.4	<0.4	<0.4	<0.4
Sodium, Dissolved	20000	14000	3600	77600	215000
Thallium, Dissolved	0.5	<0.5	<0.5	<0.5	<0.5
Vanadium, Dissolved	NE	<5	<5	<5	<5
Zinc, Dissolved	2000	7.66J	3.88J	4.53J	4.28J

Notes:

NY-AWQS=New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
NE = Not Established
EPA = United States Environmental Protection Agency
µg/l = micrograms per liter
J = Estimated value. The target analyte concentration detected below laboratory quantitation limit
< = not detected above indicated laboratory reporting limit (RL)
Exceeds standard
Laboratory method detection limit (MDL)/reporting limit (RL) exceeds or equal to New York Criteria

Table 4 : Sub-Slab Soil Gas Sample Laboratory Results Summary
10-16 Beach 19th Street
Queens, New York 11691
Partner Project Number 20-286219.1
July 9, 2020

ANALYTE	EPA Commercial VISL (10^{-6})*	EPA Commercial VISL (10^{-5})*	EPA Commercial VISL (10^{-4})*	SG-1	SG-2	SG-3	SG-4
VOCs via EPA Method TO-15 (µg/m^3)							
1,1,1-Trichloroethane	73000	73000	73000	<4.54	<13.6	<2.18	1.19
1,2,4-Trimethylbenzene	876	876	876	<4.1	<12.3	5.16	3.35
1,3,5-Trimethylbenzene	876	876	876	<4.1	<12.3	3.36	2.14
1,3-Butadiene	13.6	29.2	29.2	<1.84	<5.53	1.23	1.94
2-Butanone	73000	73000	73000	<6.13	<18.4	18.8	2.21
4-Ethyltoluene	NE	NE	NE	<4.1	<12.3	<1.97	1.1
Acetone	451000	451000	451000	20.4	<29.7	134	11.3
Benzene	52.4	438	438	<2.66	<7.99	2.96	0.789
Carbon disulfide	102000	102000	102000	<2.59	<7.79	<1.25	2.07
Chloroform	17.8	178	1430	8.4	<12.2	<1.95	1.74
Cyclohexane	87600	87600	87600	4.2	<8.61	<1.38	1.81
Dichlorodifluoromethane	1460	1460	1460	<4.12	<12.4	2.4	3.39
Ethanol	NE	NE	NE	40.3	<118	45.6	13.1
Ethylbenzene	164	1640	14600	<3.62	<10.9	<1.74	0.964
Heptane	5840	5840	5840	4.03	13.3	2.12	2
Isopropanol	2920	2920	2920	<5.11	<15.4	6.96	<1.23
n-Hexane	10200	10200	10200	22.6	22.6	<1.41	2.73
o-Xylene	1460	1460	1460	<3.62	<10.9	2.53	1.02
p/m-Xylene	NE	NE	NE	<7.25	<21.7	3.76	1.74
Tetrachloroethene	584	584	584	1670	4360	949	90.9
Toluene	73000	73000	73000	7.5	<9.42	3.92	0.987
Trichloroethene	29.2	29.2	29.2	6.5	<13.4	<2.15	<1.07
Trichlorofluoromethane	NE	NE	NE	<4.68	<14	<2.25	1.75

Notes:
VOCs = Volatile Organic Compounds
EPA = United States Environmental Protection Agency
µg/m^3 = micrograms per cubic meter
VISL = Vapor Intrusion Screening Level
* = Target Soil-Gas Concentrations for Carcinogens in the Commercial Exposure Scenario
NE = not established
< = not detected above the indicated laboratory reporting limit (RL)
Exceeds criteria

FIGURES

PSG

PSG Engineering and Geology, D.P.C
362 Fifth Avenue, Suite 501
New York, New York 10001

Project Number: 20-286219.1

N

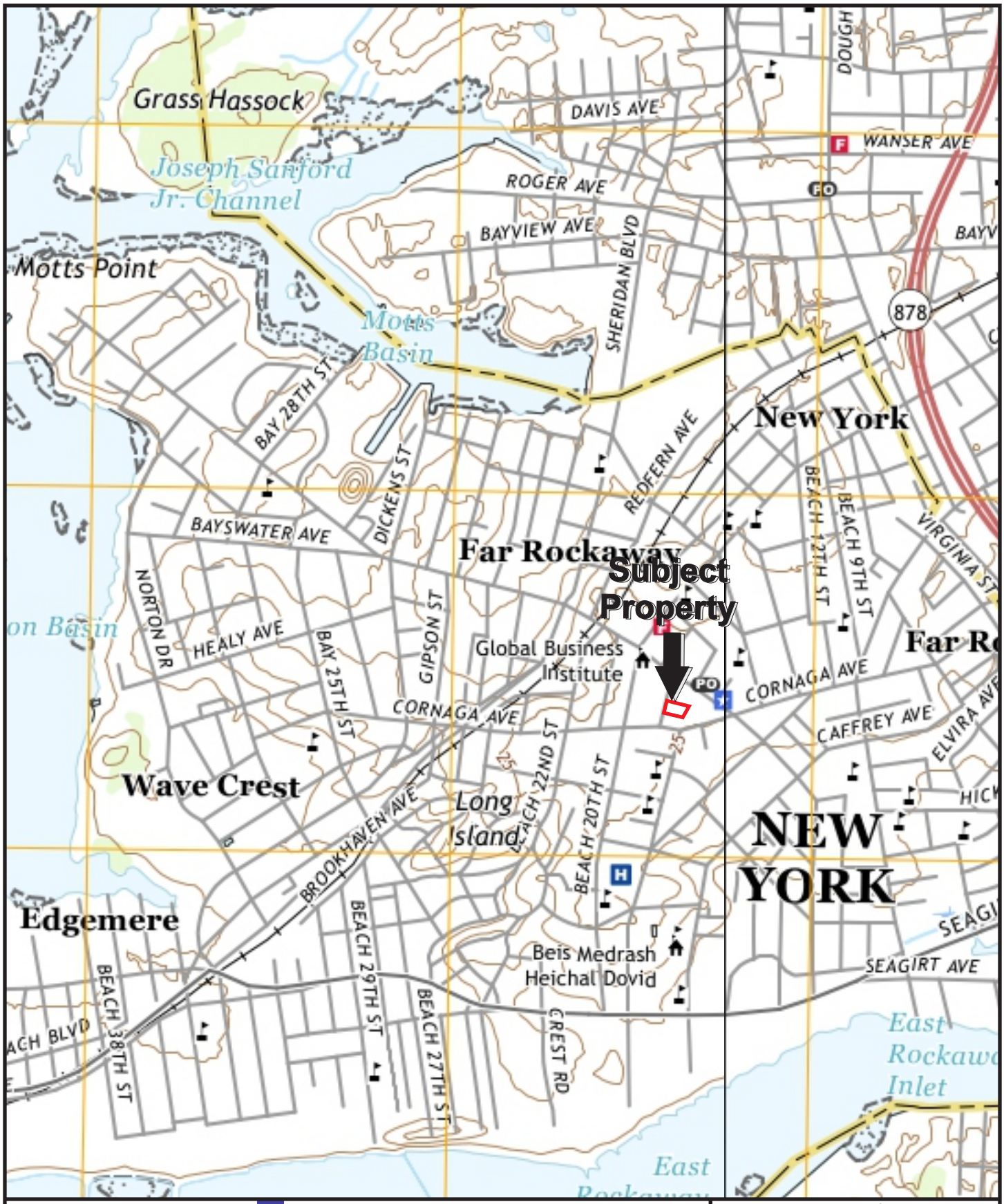
Legend

Subject Property

Site Vicinity Map

Figure	Prepared By	Date
1	J. Lokko	July 2020

10-16 Beach 19th Street
Queens, New York 11691



PSG Engineering and Geology, D.P.C
362 Fifth Avenue, Suite 501
New York, New York 10001

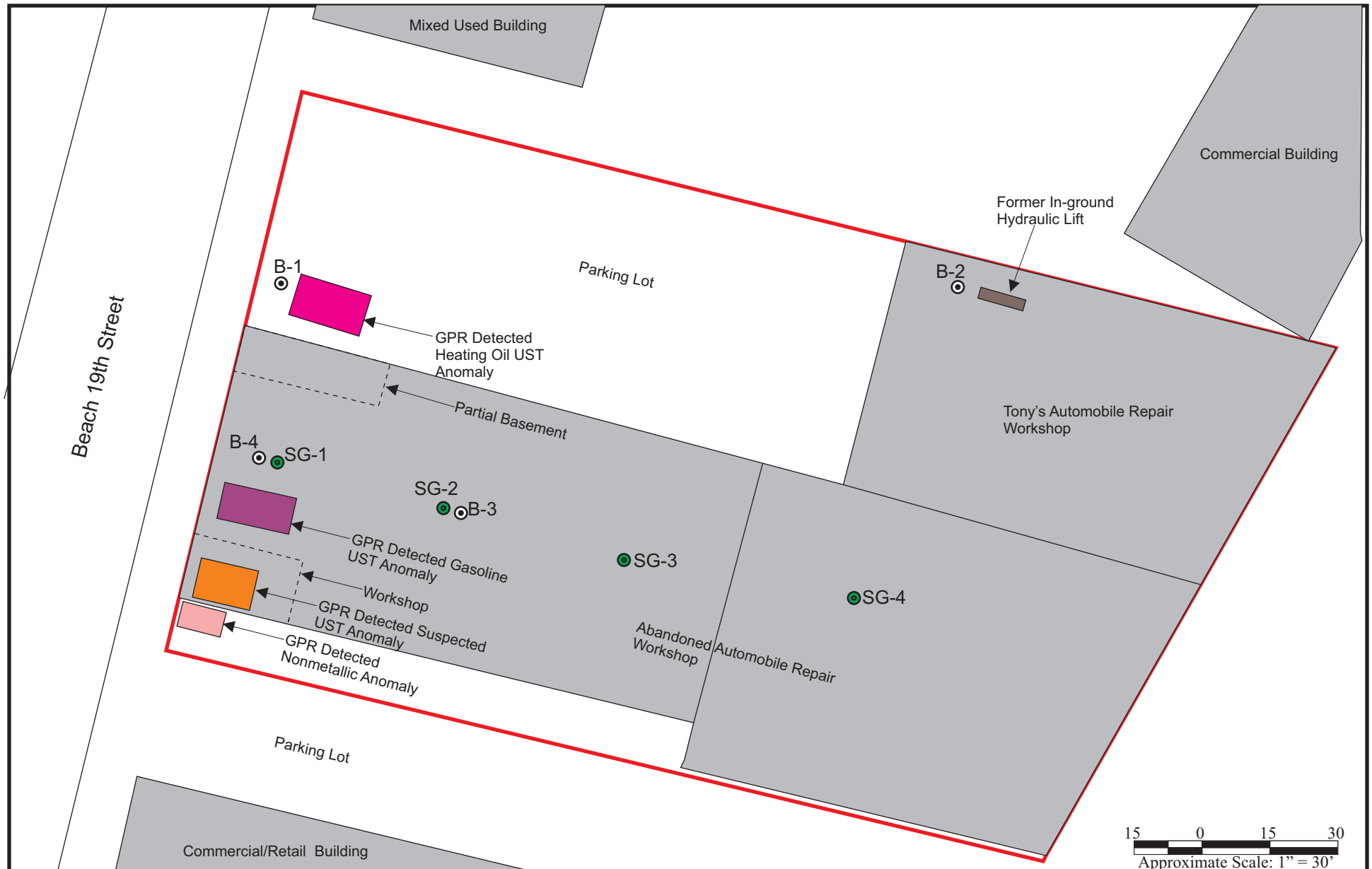
Project Number: 20-286219.1

USGS *Far Rockaway*
New York Quadrangle
Version: 2019

Topographic Map

Figure	Prepared By	Date
2	J. Lokko	July 2020

10-16 Beach 19th Street
Queens, New York 11691



Legend

Subject Property

Soil /Groundwater Sample Location

Sub-Slab Soil Gas Sample Location

N

PSG Engineering and Geology, D.P.C
362 Fifth Avenue, Suite 501
New York, New York 10001

Project Number: 20-286219.1

Sample Location Map

Figure	Prepared By	Date
3	J. Lokko	July 2020

10-16 Beach 19th Street
Queens, New York 11691

APPENDIX A: BORING LOGS

PSG

Boring Number:	**B-1**				Page 1 of 1
Location:	Exterior northwestern portion of property near GPR detected heating oil UST anomaly			Date Started:	7/14/2020
Site Address:	10-16 Beach 19th Street			Date Completed:	7/14/2020
	Queens, New York 11691			Depth to Groundwater:	20.0 feet
Project Number:	20-286219.1			Field Technician:	Jonathan Lokko
Drill Rig Type:	Geoprobe 6620DT			**PSG Engineering and Geology, D.P.C**	
Sampling Equipment:	5 ft Macrocores			362 Fifth Avenue, Suite 501	
Borehole Diameter:	2 inch			New York, New York 10001	

Depth	Sample	PID	USCS	Description	Notes
1		0.0		Asphalt and gravel	
2		0.0			
3		0.0	SM	Brown medium Sand with gravel	3.0 feet recovery. No petroleum-like odors or staining observed.
4		0.0			
5		0.0			
6		14.1			
7		17.9			
8		37.1	SM	Brown medium Sand with gravel	3.0 feet recovery. No petroleum-like odors or staining observed
9		37.9			
10		40.4			
11		28.1			
12		30.1			
13		30.1	SM	Brown fine to medium Sand with gravel	3.0 feet recovery. No petroleum-like odors or staining observed
14		30.6			
15		31.8			
16		38.9			
17		38.4			4.8 feet recovery. No petroleum-like odors or staining observed
18		41.7	SM	Brown fine to medium Sand with gravel, sligtly wet at 19-20 feet	
19	B-1	44.2			Soil sample B-1 collected at 9:30 from interval 18.0 - 19.0 feet bgs.
20		42.1			
21		40.4			
22		26.7			
23		27.9	SM	Brown fine to medium Sand with gravel, saturated	4.9 feet recovery. Slight petroleum-like odors noticed at 24-25 feet
24		38.9			
25		39.1			
				Boring terminated at 25 feet bgs	Boring converted to temporary well point B-1GW at terminal depth of 25 ft; screened from 20 to 25 feet bgs.

Boring Number:	**B-2**				Page 1 of 1
Location:	Interior northeastern portion of property (active automotive repair workshop) near a former in-ground hydraulic lift			Date Started:	7/14/2020
Site Address:	10-16 Beach 19th Street			Date Completed:	7/14/2020
	Queens, New York 11691			Depth to Groundwater:	18.0 feet
Project Number:	20-286219.1			Field Technician:	Jonathan Lokko
Drill Rig Type:	Geoprobe 6620DT			**PSG Engineering and Geology, D.P.C**	
Sampling Equipment:	5 ft Macrocores			362 Fifth Avenue, Suite 501	
Borehole Diameter:	2 inch			New York, New York 10001	

Depth	Sample	PID	USCS	Description	Notes
1		0.0		Concrete and gravel	
2		3.5			
3		1.9	SM	Brown medium Sand with gravel	3.0 feet recovery. No petroleum-like odors or staining observed.
4		1.4			
5		1.2			
6		1.7			
7		1.8			
8		1.9	SM	Brown medium Sand with gravel	3.0 feet recovery. No petroleum-like odors or staining observed
9		1.9			
10		1.9			
11		3.2			
12		4.3			3.0 feet recovery. No petroleum-like odors or staining observed
13		14.6	SM	Brown medium Sand with gravel	
14		20.4			
15	B-2	28.1			Soil sample B-2 collected at 11:00 from interval 14.0 - 15.0 feet bgs.
16		1.9			
17		0.9			
18		0.7	SM	Brown fine to medium Sand with gravel, sligtly wet at 18-20 feet	4.0 feet recovery. No petroleum-like odors or staining observed
19		0.6			
20		0.6			
21		0.6			
22		0.8			
23		0.7	SM	Brown fine to medium Sand with gravel, saturated	4.5 feet recovery. No petroleum-like odors or staining observed
24		0.6			
25		0.6			
				Boring terminated at 25 feet bgs	Boring converted to temporary well point B-2GW at terminal depth of 25 ft; screened from 20 to 25 feet bgs.

Boring Number:	**B-3**				Page 1 of 1
Location:	Interior central portion of property (abandoned automotive repair workshop) in an area of floor staining			Date Started:	7/14/2020
Site Address:	10-16 Beach 19th Street			Date Completed:	7/14/2020
	Queens, New York 11691			Depth to Groundwater:	20.0 feet
Project Number:	20-286219.1			Field Technician:	Jonathan Lokko
Drill Rig Type:	Geoprobe 6620DT			**PSG Engineering and Geology, D.P.C**	
Sampling Equipment:	5 ft Macrocores			362 Fifth Avenue, Suite 501	
Borehole Diameter:	2 inch			New York, New York 10001	

Depth	Sample	PID	USCS	Description	Notes
0.5		0.0		Concrete	3.0 feet recovery. No petroleum-like odors or staining observed. Soil sample B-3 collected at 12:00 from interval 2.0 - 3.0 feet bgs.
1		1.7	SM	Brown silty Sand with gravel, glass and concrete fragments	
2		1.7			
3	B-3	1.8			
4		0.5		Brown fine to medium Sand with gravel	
5		0.5			
6		0.5	SM	Brown fine to medium Sand with gravel	3.0 feet recovery. No petroleum-like odors or staining observed
7		0.5			
8		0.5			
9		0.1			
10		0.1			
11		0.1	SM	Brown fine to medium Sand with gravel	4.0 feet recovery. No petroleum-like odors or staining observed
12		0.1			
13		0.1			
14		0.1			
15		0.1			
16		0.0	SM	Brown medium Sand with gravel	4.0 feet recovery. No petroleum-like odors or staining observed
17		0.0			
18		0.0			
19		0.0			
20		0.0			
21		0.0	SM	Brown fine to medium Sand with gravel, saturated	3.5 feet recovery. No petroleum-like odors or staining observed
22		0.0			
23		0.0			
24		0.0			
25		0.0			
				Boring terminated at 25 feet bgs	Boring converted to temporary well point B-3GW at terminal depth of 25 ft; screened from 20 to 25 feet bgs.

Boring Number:	**B-4**				Page 1 of 1
Location:	Interior western portion of property (abandoned automotive repair workshop) near GPR detected gasoline oil UST anomaly			Date Started:	7/14/2020
Site Address:	10-16 Beach 19th Street			Date Completed:	7/14/2020
	Queens, New York 11691			Depth to Groundwater:	20.0 feet
Project Number:	20-286219.1			Field Technician:	Jonathan Lokko
Drill Rig Type:	Geoprobe 6620DT			**PSG Engineering and Geology, D.P.C**	
Sampling Equipment:	5 ft Macrocores			362 Fifth Avenue, Suite 501	
Borehole Diameter:	2 inch			New York, New York 10001	

Depth	Sample	PID	USCS	Description	Notes
0.5		0.0		Concrete	
1		0.3	SM	Brown silty Sand with gravel and rock fragments	4.0 feet recovery. No petroleum-like odors or staining observed.
2		0.3			
3		0.2			
4		0.4		Brown medium Sand with gravel	
5		0.4			
6		0.4	SM	Brown fine to medium Sand with gravel	3.0 feet recovery. No petroleum-like odors or staining observed
7		0.5			
8		0.5			
9		0.5			
10		0.5			
11		0.5	SM	Brown fine to medium Sand with gravel	4.0 feet recovery. No petroleum-like odors or staining observed
12		0.5			
13		0.4			
14		0.4			
15		0.5			
16		0.7	SM	Brown medium Sand with gravel	
17	B-4	0.8			Soil sample B-4 collected at 12:55 from interval 16.0 - 17.0 feet bgs.
18		0.5			
19		0.5			4.5 feet recovery. No petroleum-like odors or staining observed
20		0.5			
21		0.3	SM	Brown fine to medium Sand with gravel, saturated	3.5 feet recovery. No petroleum-like odors or staining observed
22		0.3			
23		0.2			
24		0.2			
25		0.0			
				Boring terminated at 25 feet bgs	Boring converted to temporary well point B-4GW at terminal depth of 25 ft; screened from 20 to 25 feet bgs.

APPENDIX B: GEOPHYSICAL SURVEY REPORT

PSG

DELTA Geophysics Inc.

GEOPHYSICAL INVESTIGATION REPORT

SITE LOCATION:

10-16 Beach 19th Street
Far Rockaway, New York

PREPARED FOR:

Partner Engineering and Science, Inc.
611 Industrial Way
Eatontown, New Jersey

PREPARED BY:

Benjamin Rimler
Delta Geophysics Inc.
738 Front Street
Catasauqua, PA 18032

July 13, 2020

Delta Geophysics, Inc. (Delta) is pleased to provide the results of the geophysical survey conducted at 10-16 Beach 19th Street, Far Rockaway, New York.

1.0 INTRODUCTION

On July 09, 2020 Delta Geophysics personnel performed a limited geophysical investigation at 10-16 Beach 19th Street, Far Rockaway, New York. The area of interest was all accessible areas on the property. Subsurface conditions were unknown at the time of survey. Surface conditions consisted of asphalt, concrete, and gravel.

2.0 SCOPE OF WORK

The survey was conducted to investigate the subsurface for anomalies consistent with USTs. A secondary objective was to locate and mark subsurface utilities in close proximity to client proposed borings.

3.0 METHODOLOGY

Selection of survey equipment is dependent site conditions and project objectives. For this project the technician utilized the following equipment to survey the area of concern:

- Geophysical Survey Systems Inc. SIR-3000 cart-mounted Ground Penetrating Radar (GPR) unit with a 400 Mhz antenna.
- Radiodetection RD7000 precision utility locator.
- Fisher M-Scope TW-6 pipe and cable locator.

Ground penetrating radar (commonly called GPR) is a geophysical method that has been developed over the past thirty years for shallow, high-resolution, subsurface investigations of the earth. GPR uses high frequency pulsed electromagnetic waves (generally 10 MHz to 1,000 MHz) to acquire subsurface information. Energy is propagated downward into the ground and is reflected back to the surface from boundaries at which there are electrical property contrasts. GPR is a method that is commonly used for environmental, engineering, archeological, and other shallow investigations.

The GSSI SIR-3000 GPR can accept a wide variety of antennas which provide various depths of penetration and levels of resolution. The 400 MHz antenna can achieve depths of penetration up to about 20 feet, but this depth may be greatly reduced due to site-specific conditions. Signal penetration decreases with increased soil conductivity. Conductive materials attenuate or absorb the GPR signal. As depth increases the return signal becomes weaker. Penetration is the greatest in unsaturated sands and fine gravels. Clayey, highly saline or saturated soils, areas covered by steel reinforced concrete, foundry slag, of other highly conductive materials significantly reduces GPR depth of penetration.

The GPR was configured to transmit to a depth of approximately 10 feet below the subsurface, but actual signal penetration was limited to approximately 3-5 feet below ground surface (bgs). The limiting factor was signal attenuation from near surface soils.

The RD7000 precision utility locator uses radio emission to trace the location of metal bearing utilities. This radio emission can be active or passive. Active tracing requires the attachment of a radio transmitter to the utility, passive tracing uses radio emissions that are present on the utility. Underground electrical utilities typically emit radio signals that this device can detect.

The TW-6 is designed to find pipes, cables and other metallic objects such as underground storage tanks. One surveyor can carry both the transmitter and receiver together, making it ideally suited for exploration type searches of ferrous metal masses. Metal detectors of this type operate by generating a magnetic field at the transmitter which causes metallic objects in the subsurface to generate a secondary magnetic field. The induced secondary field is detected by the receiver, which generates an audible tone equal to the strength of the secondary field.

4.0 SURVEY FINDINGS

All accessible areas throughout the property were examined during this investigation. Each location was examined with the RD7000 for potential subsurface utilities then the property was surveyed with GPR and TW-6 for other potential anomalies.

Nonmetallic Anomaly #1

GPR transects in the alley south of the building detected a nonmetallic anomaly. GPR transects imaged a cylindrical anomaly 4 feet bgs. Approximate dimensions measure 10 feet by 6 feet.

Gasoline UST

Delta personnel observed a gasoline vent in the sidewalk west of the building. Vent piping was detected east of the vent for approximately 6 feet. TW-6 transects in area where vent piping ended detected a metallic anomaly. GPR transects confirmed a cylindrical anomaly 2-3 feet bgs. Approximate dimensions measure 8 feet by 5 feet. The anomaly is consistent with a gasoline UST

Suspected UST Location

Delta personnel observed a gasoline vent in the sidewalk west of the building. Vent piping was detected east of the vent for approximately 6 feet. Due to interior walls and unmovable equipment, the area where vent piping ended could not be surveyed with TW-6 or GPR. A potential anomaly may exist in this area.

Heating Oil UST

Delta personnel observed a cut product piping in the north wall of the partial basement. Product piping was detected north of the partial basement for approximately 8 feet. Buried reinforced concrete in this area prevented use of TW-6. GPR transects imaged a cylindrical anomaly 2-3 feet bgs. Approximate dimensions measure 10 feet by 6 feet. The anomaly is consistent with a UST.

In Ground Lifts

Delta personnel observed flat metal plate in the area of a reported in ground lift inside the active garage. GPR transects in this area imaged piping entering the plated area. The anomaly is consistent with an in ground lift. Delta personnel believe there is potential for 2 more lifts inside of the former garage area due to observed hydraulic valves on the north wall, east of the partial basement. Large areas of debris limited GPR survey in this area.

Utility Survey

Delta performed a utility survey in client area of interest. The following utilities were identified: electric conduit, natural gas, water, sanitary sewer, product piping, hydraulic lines, and unknown utilities. All utilities were marked onsite with appropriate colors.

A site map (D070920) is included with all located subsurface features.

5.0 SURVEY LIMITATIONS

GPR depth of effective penetration was limited to approximately 3-5 feet bgs. The limiting factor was due to conductive soils. Buried reinforced concrete in the asphalt lot north of the building limited TW-6 and GPR transects. Vehicles in the asphalt lot north of the building limited survey area. Debris, and vehicles inside of the building limited survey area. Particular attention when looking for USTs was given to areas with reported USTs on Sanborn map, and where evidence of USTs was observed.

6.0 WARRANTIES AND DISCLAIMER

As with any geophysical method, it must be stressed that caution be used during any excavation or intrusive testing in proximity to any anomalies indicated in this report. In addition, the absence of detected signatures does not preclude the possibility that targets may exist. To the extent the client desires more definitive conclusions than are warranted by the currently available facts; it is specifically Delta's intent that the conclusions stated herein will be intended as guidance.

This report is based upon the application of scientific principles and professional judgment to certain facts with resultant subjective interpretations. Professional judgments expressed herein are based on the facts currently available within the limit or scope of work, budget and schedule. Delta represents that the services were performed in a manner consistent with currently accepted professional practices employed by geophysical/geological consultants under similar circumstances. No other representations to Client, express or implied, and no warranty or guarantee is included or intended in this agreement, or in any report, document, or otherwise.

This report was prepared pursuant to the contract Delta has with the Client. That contractual relationship included an exchange of information about the property that was unique and between Delta and its client and serves as the basis upon which this report was prepared. Because of the importance of the understandings between Delta and its client, reliance or any use of this report by

anyone other than the Client, for whom it was prepared, is prohibited and therefore not foreseeable to Delta.

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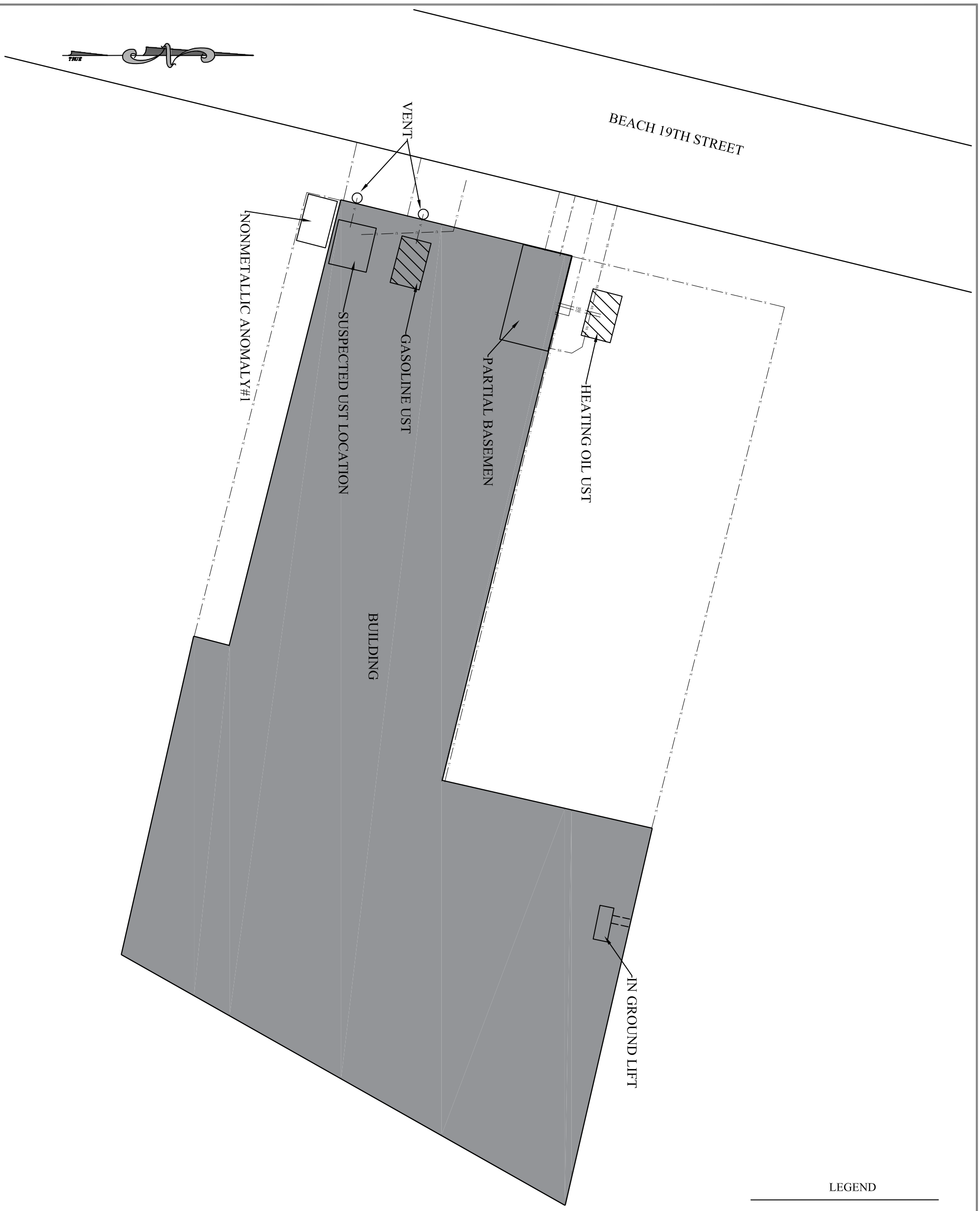

NOTES:

This site plan was produced from data positioned by differential GPS measurments collected in the field. Due to the errors normally present in DGPS data, this document is not intended or represented to be of survey precision. Caution should be used in all field measurments based on this site plan.

As with any geophysical method, it must be stressed that caution be used during any excavation or intrusive testing in proximity of any anomalies indicated in this document The absence of detected signatures does not preclude the possibility that targets exist. The geophysical data and results presented in this site plan are based upon the application of scientific principles and professional judgements to certain facts with resultant subjective interpretations. Professional judgements expressed herein are based on the facts currently available within the limits of the existing data, scope of work, budget, and schedule.

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0 10 20 40 60

GRAPHIC SCALE IN FEET

LEGEND

- E — E — ELECTRIC
- G — G — NATURAL GAS
- SS — SS — SANITARY SEWER
- OIL — PRODUCT PIPING
- W — W — WATER
- U — U — UNKNOWN
- V — V — VENT
- HYDRAULIC LINES
- X — X — FENCE

DATE	07/12/20
SCALE	1'' = 20'
DWG NO.	070920
SHT NO.	1 OF 1
PROJECT.	

GEOPHYSICAL INVESTIGATION

10-16 BEACH 19TH STREET, FAR ROCKAWAY, NY

FOR

PARTNER ENGINEERING AND SCIENCE, INC.

DELTA Geophysics Inc.
738 Front Street, Catasauqua, PA 18032
Phone: (610) 231-73012

APPENDIX C: LABORATORY ANALYTICAL REPORT

PSG

ANALYTICAL REPORT

Lab Number:	L2029724
Client:	Partner Engineering & Science, Inc. 611 Industrial Way W. Eatontown, NJ 07724
ATTN:	Andres Simonson
Phone:	(732) 380-1700
Project Name:	20-286219.1
Project Number:	20-286219.1
Report Date:	07/15/20

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2029724-01	B-1	SOIL	10-16 BEACH 19TH STREET, QUEENS, NY, 11691	07/14/20 09:30	07/14/20
L2029724-02	B-2	SOIL	10-16 BEACH 19TH STREET, QUEENS, NY, 11691	07/14/20 11:00	07/14/20
L2029724-03	B-3	SOIL	10-16 BEACH 19TH STREET, QUEENS, NY, 11691	07/14/20 12:00	07/14/20
L2029724-04	B-4	SOIL	10-16 BEACH 19TH STREET, QUEENS, NY, 11691	07/14/20 12:55	07/14/20
L2029724-05	B-1GW	WATER	10-16 BEACH 19TH STREET, QUEENS, NY, 11691	07/14/20 09:45	07/14/20
L2029724-06	B-2GW	WATER	10-16 BEACH 19TH STREET, QUEENS, NY, 11691	07/14/20 11:15	07/14/20
L2029724-07	B-3GW	WATER	10-16 BEACH 19TH STREET, QUEENS, NY, 11691	07/14/20 12:10	07/14/20
L2029724-08	B-4GW	WATER	10-16 BEACH 19TH STREET, QUEENS, NY, 11691	07/14/20 13:15	07/14/20

Project Name:	20-286219.1	**Lab Number:**	L2029724
Project Number:	20-286219.1	**Report Date:**	07/15/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	20-286219.1	**Lab Number:**	L2029724
Project Number:	20-286219.1	**Report Date:**	07/15/20

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Semivolatile Organics

The WG1392096-3 LCSD recovery, associated with L2029724-05 through -08, is below the acceptance criteria for benzoic acid (0%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

Total Metals

L2029724-01 through -04: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by matrix interferences encountered during analysis.

The WG1392313-3 MS recoveries for aluminum (265%) and iron (0%), performed on L2029724-05, do not apply because the sample concentration is greater than four times the spike amount added.

The WG1392313-3 MS recoveries, performed on L2029724-05, are outside the acceptance criteria for beryllium (126%), sodium (72%) and lead (74%). A post digestion spike was performed and was within acceptance criteria.

Dissolved Metals

The WG1392311-3 MS recoveries for calcium (51%), iron (64%) and sodium (0%), performed on L2029724-07, do not apply because the sample concentration is greater than four times the spike amount added.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Jennifer L Clements

Title: Technical Director/Representative Date: 07/15/20

ORGANICS

VOLATILES

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-01 Date Collected: 07/14/20 09:30

Client ID: B-1 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 07/15/20 08:17

Analyst: JC

Percent Solids: 96%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.8	2.2	1
1,1-Dichloroethane	ND		ug/kg	0.96	0.14	1
Chloroform	ND		ug/kg	1.4	0.13	1
Carbon tetrachloride	ND		ug/kg	0.96	0.22	1
1,2-Dichloropropane	ND		ug/kg	0.96	0.12	1
Dibromochloromethane	ND		ug/kg	0.96	0.13	1
1,1,2-Trichloroethane	ND		ug/kg	0.96	0.26	1
Tetrachloroethene	0.51		ug/kg	0.48	0.19	1
Chlorobenzene	ND		ug/kg	0.48	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.8	0.67	1
1,2-Dichloroethane	ND		ug/kg	0.96	0.25	1
1,1,1-Trichloroethane	ND		ug/kg	0.48	0.16	1
Bromodichloromethane	ND		ug/kg	0.48	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.96	0.26	1
cis-1,3-Dichloropropene	ND		ug/kg	0.48	0.15	1
1,3-Dichloropropene, Total	ND		ug/kg	0.48	0.15	1
1,1-Dichloropropene	ND		ug/kg	0.48	0.15	1
Bromoform	ND		ug/kg	3.8	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.48	0.16	1
Benzene	ND		ug/kg	0.48	0.16	1
Toluene	ND		ug/kg	0.96	0.52	1
Ethylbenzene	ND		ug/kg	0.96	0.14	1
Chloromethane	ND		ug/kg	3.8	0.89	1
Bromomethane	ND		ug/kg	1.9	0.56	1
Vinyl chloride	ND		ug/kg	0.96	0.32	1
Chloroethane	ND		ug/kg	1.9	0.43	1
1,1-Dichloroethene	ND		ug/kg	0.96	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-01 Date Collected: 07/14/20 09:30

Client ID: B-1 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.48	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,3-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	1.9	0.16	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.19	1
p/m-Xylene	ND		ug/kg	1.9	0.54	1
o-Xylene	ND		ug/kg	0.96	0.28	1
Xylenes, Total	ND		ug/kg	0.96	0.28	1
cis-1,2-Dichloroethene	ND		ug/kg	0.96	0.17	1
1,2-Dichloroethene, Total	ND		ug/kg	0.96	0.13	1
Dibromomethane	ND		ug/kg	1.9	0.23	1
Styrene	ND		ug/kg	0.96	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.6	0.88	1
Acetone	110		ug/kg	9.6	4.6	1
Carbon disulfide	ND		ug/kg	9.6	4.4	1
2-Butanone	ND		ug/kg	9.6	2.1	1
Vinyl acetate	ND		ug/kg	9.6	2.1	1
4-Methyl-2-pentanone	ND		ug/kg	9.6	1.2	1
1,2,3-Trichloropropane	ND		ug/kg	1.9	0.12	1
2-Hexanone	ND		ug/kg	9.6	1.1	1
Bromochloromethane	ND		ug/kg	1.9	0.20	1
2,2-Dichloropropane	ND		ug/kg	1.9	0.19	1
1,2-Dibromoethane	ND		ug/kg	0.96	0.27	1
1,3-Dichloropropane	ND		ug/kg	1.9	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.48	0.13	1
Bromobenzene	ND		ug/kg	1.9	0.14	1
n-Butylbenzene	2.8		ug/kg	0.96	0.16	1
sec-Butylbenzene	1.4		ug/kg	0.96	0.14	1
tert-Butylbenzene	ND		ug/kg	1.9	0.11	1
o-Chlorotoluene	ND		ug/kg	1.9	0.18	1
p-Chlorotoluene	ND		ug/kg	1.9	0.10	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.9	0.96	1
Hexachlorobutadiene	ND		ug/kg	3.8	0.16	1
Isopropylbenzene	ND		ug/kg	0.96	0.10	1
p-Isopropyltoluene	0.40	J	ug/kg	0.96	0.10	1
Naphthalene	ND		ug/kg	3.8	0.62	1
Acrylonitrile	ND		ug/kg	3.8	1.1	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-01 Date Collected: 07/14/20 09:30

Client ID: B-1 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	0.96	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.9	0.31	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.9	0.26	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.9	0.18	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.9	0.32	1
1,4-Dioxane	ND		ug/kg	77	34.	1
p-Diethylbenzene	ND		ug/kg	1.9	0.17	1
p-Ethyltoluene	ND		ug/kg	1.9	0.37	1
1,2,4,5-Tetramethylbenzene	2.7		ug/kg	1.9	0.18	1
Ethyl ether	ND		ug/kg	1.9	0.33	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.8	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	111		70-130

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-02
Client ID: B-2
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 11:00
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 07/15/20 08:45
Analyst: JC
Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.1	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	1.0	0.23	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.13	1
Dibromochloromethane	ND		ug/kg	1.0	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27	1
Tetrachloroethene	0.80		ug/kg	0.51	0.20	1
Chlorobenzene	ND		ug/kg	0.51	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.1	0.71	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.26	1
1,1,1-Trichloroethane	ND		ug/kg	0.51	0.17	1
Bromodichloromethane	ND		ug/kg	0.51	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.28	1
cis-1,3-Dichloropropene	ND		ug/kg	0.51	0.16	1
1,3-Dichloropropene, Total	ND		ug/kg	0.51	0.16	1
1,1-Dichloropropene	ND		ug/kg	0.51	0.16	1
Bromoform	ND		ug/kg	4.1	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.51	0.17	1
Benzene	ND		ug/kg	0.51	0.17	1
Toluene	ND		ug/kg	1.0	0.55	1
Ethylbenzene	ND		ug/kg	1.0	0.14	1
Chloromethane	ND		ug/kg	4.1	0.95	1
Bromomethane	0.73	J	ug/kg	2.0	0.59	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
Chloroethane	ND		ug/kg	2.0	0.46	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-02 Date Collected: 07/14/20 11:00

Client ID: B-2 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.51	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.20	1
p/m-Xylene	ND		ug/kg	2.0	0.57	1
o-Xylene	ND		ug/kg	1.0	0.30	1
Xylenes, Total	ND		ug/kg	1.0	0.30	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	2.0	0.24	1
Styrene	ND		ug/kg	1.0	0.20	1
Dichlorodifluoromethane	ND		ug/kg	10	0.93	1
Acetone	13		ug/kg	10	4.9	1
Carbon disulfide	ND		ug/kg	10	4.6	1
2-Butanone	ND		ug/kg	10	2.3	1
Vinyl acetate	ND		ug/kg	10	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.3	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13	1
2-Hexanone	ND		ug/kg	10	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.21	1
2,2-Dichloropropane	ND		ug/kg	2.0	0.21	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.28	1
1,3-Dichloropropane	ND		ug/kg	2.0	0.17	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.51	0.13	1
Bromobenzene	ND		ug/kg	2.0	0.15	1
n-Butylbenzene	ND		ug/kg	1.0	0.17	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.0	0.12	1
o-Chlorotoluene	ND		ug/kg	2.0	0.19	1
p-Chlorotoluene	ND		ug/kg	2.0	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.1	1.0	1
Hexachlorobutadiene	ND		ug/kg	4.1	0.17	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.11	1
Naphthalene	ND		ug/kg	4.1	0.66	1
Acrylonitrile	ND		ug/kg	4.1	1.2	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-02 Date Collected: 07/14/20 11:00

Client ID: B-2 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.0	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.33	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.28	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.20	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.34	1
1,4-Dioxane	ND		ug/kg	82	36.	1
p-Diethylbenzene	ND		ug/kg	2.0	0.18	1
p-Ethyltoluene	ND		ug/kg	2.0	0.39	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19	1
Ethyl ether	ND		ug/kg	2.0	0.35	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.1	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	103		70-130

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-03 Date Collected: 07/14/20 12:00

Client ID: B-3 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 07/15/20 09:12

Analyst: JC

Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.6	2.6	1
1,1-Dichloroethane	ND		ug/kg	1.1	0.16	1
Chloroform	ND		ug/kg	1.7	0.16	1
Carbon tetrachloride	ND		ug/kg	1.1	0.26	1
1,2-Dichloropropane	ND		ug/kg	1.1	0.14	1
Dibromochloromethane	ND		ug/kg	1.1	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.1	0.30	1
Tetrachloroethene	11		ug/kg	0.56	0.22	1
Chlorobenzene	ND		ug/kg	0.56	0.14	1
Trichlorofluoromethane	ND		ug/kg	4.4	0.77	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.29	1
1,1,1-Trichloroethane	ND		ug/kg	0.56	0.19	1
Bromodichloromethane	ND		ug/kg	0.56	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.30	1
cis-1,3-Dichloropropene	ND		ug/kg	0.56	0.18	1
1,3-Dichloropropene, Total	ND		ug/kg	0.56	0.18	1
1,1-Dichloropropene	ND		ug/kg	0.56	0.18	1
Bromoform	ND		ug/kg	4.4	0.27	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.56	0.18	1
Benzene	ND		ug/kg	0.56	0.18	1
Toluene	ND		ug/kg	1.1	0.60	1
Ethylbenzene	ND		ug/kg	1.1	0.16	1
Chloromethane	ND		ug/kg	4.4	1.0	1
Bromomethane	0.76	J	ug/kg	2.2	0.65	1
Vinyl chloride	ND		ug/kg	1.1	0.37	1
Chloroethane	ND		ug/kg	2.2	0.50	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.26	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.15	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-03 Date Collected: 07/14/20 12:00

Client ID: B-3 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.56	0.15	1
1,2-Dichlorobenzene	ND		ug/kg	2.2	0.16	1
1,3-Dichlorobenzene	ND		ug/kg	2.2	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	2.2	0.19	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.22	1
p/m-Xylene	ND		ug/kg	2.2	0.62	1
o-Xylene	ND		ug/kg	1.1	0.32	1
Xylenes, Total	ND		ug/kg	1.1	0.32	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.15	1
Dibromomethane	ND		ug/kg	2.2	0.26	1
Styrene	ND		ug/kg	1.1	0.22	1
Dichlorodifluoromethane	ND		ug/kg	11	1.0	1
Acetone	12		ug/kg	11	5.4	1
Carbon disulfide	ND		ug/kg	11	5.1	1
2-Butanone	ND		ug/kg	11	2.5	1
Vinyl acetate	ND		ug/kg	11	2.4	1
4-Methyl-2-pentanone	ND		ug/kg	11	1.4	1
1,2,3-Trichloropropane	ND		ug/kg	2.2	0.14	1
2-Hexanone	ND		ug/kg	11	1.3	1
Bromochloromethane	ND		ug/kg	2.2	0.23	1
2,2-Dichloropropane	ND		ug/kg	2.2	0.22	1
1,2-Dibromoethane	ND		ug/kg	1.1	0.31	1
1,3-Dichloropropane	ND		ug/kg	2.2	0.19	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.56	0.15	1
Bromobenzene	ND		ug/kg	2.2	0.16	1
n-Butylbenzene	ND		ug/kg	1.1	0.19	1
sec-Butylbenzene	ND		ug/kg	1.1	0.16	1
tert-Butylbenzene	ND		ug/kg	2.2	0.13	1
o-Chlorotoluene	ND		ug/kg	2.2	0.21	1
p-Chlorotoluene	ND		ug/kg	2.2	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.3	1.1	1
Hexachlorobutadiene	ND		ug/kg	4.4	0.19	1
Isopropylbenzene	ND		ug/kg	1.1	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.12	1
Naphthalene	ND		ug/kg	4.4	0.72	1
Acrylonitrile	ND		ug/kg	4.4	1.3	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-03 Date Collected: 07/14/20 12:00

Client ID: B-3 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.1	0.19	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.2	0.36	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.2	0.30	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.2	0.22	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.2	0.37	1
1,4-Dioxane	ND		ug/kg	89	39.	1
p-Diethylbenzene	ND		ug/kg	2.2	0.20	1
p-Ethyltoluene	ND		ug/kg	2.2	0.43	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.2	0.21	1
Ethyl ether	ND		ug/kg	2.2	0.38	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.6	1.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	107		70-130

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-04 Date Collected: 07/14/20 12:55

Client ID: B-4 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 07/15/20 09:39

Analyst: JC

Percent Solids: 98%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.3	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Chloroform	ND		ug/kg	1.6	0.15	1
Carbon tetrachloride	ND		ug/kg	1.0	0.24	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.13	1
Dibromochloromethane	ND		ug/kg	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.28	1
Tetrachloroethene	ND		ug/kg	0.53	0.21	1
Chlorobenzene	ND		ug/kg	0.53	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.2	0.73	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.27	1
1,1,1-Trichloroethane	ND		ug/kg	0.53	0.18	1
Bromodichloromethane	ND		ug/kg	0.53	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.29	1
cis-1,3-Dichloropropene	ND		ug/kg	0.53	0.17	1
1,3-Dichloropropene, Total	ND		ug/kg	0.53	0.17	1
1,1-Dichloropropene	ND		ug/kg	0.53	0.17	1
Bromoform	ND		ug/kg	4.2	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.53	0.18	1
Benzene	ND		ug/kg	0.53	0.18	1
Toluene	ND		ug/kg	1.0	0.57	1
Ethylbenzene	ND		ug/kg	1.0	0.15	1
Chloromethane	ND		ug/kg	4.2	0.98	1
Bromomethane	ND		ug/kg	2.1	0.61	1
Vinyl chloride	ND		ug/kg	1.0	0.35	1
Chloroethane	ND		ug/kg	2.1	0.48	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.14	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-04 Date Collected: 07/14/20 12:55

Client ID: B-4 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.53	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.1	0.15	1
1,3-Dichlorobenzene	ND		ug/kg	2.1	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	2.1	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.21	1
p/m-Xylene	ND		ug/kg	2.1	0.59	1
o-Xylene	ND		ug/kg	1.0	0.31	1
Xylenes, Total	ND		ug/kg	1.0	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	2.1	0.25	1
Styrene	ND		ug/kg	1.0	0.21	1
Dichlorodifluoromethane	ND		ug/kg	10	0.96	1
Acetone	16		ug/kg	10	5.1	1
Carbon disulfide	ND		ug/kg	10	4.8	1
2-Butanone	ND		ug/kg	10	2.3	1
Vinyl acetate	ND		ug/kg	10	2.3	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.4	1
1,2,3-Trichloropropane	ND		ug/kg	2.1	0.13	1
2-Hexanone	ND		ug/kg	10	1.2	1
Bromochloromethane	ND		ug/kg	2.1	0.22	1
2,2-Dichloropropane	ND		ug/kg	2.1	0.21	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.29	1
1,3-Dichloropropane	ND		ug/kg	2.1	0.18	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.53	0.14	1
Bromobenzene	ND		ug/kg	2.1	0.15	1
n-Butylbenzene	ND		ug/kg	1.0	0.18	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.1	0.12	1
o-Chlorotoluene	ND		ug/kg	2.1	0.20	1
p-Chlorotoluene	ND		ug/kg	2.1	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.2	1.0	1
Hexachlorobutadiene	ND		ug/kg	4.2	0.18	1
Isopropylbenzene	ND		ug/kg	1.0	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.12	1
Naphthalene	ND		ug/kg	4.2	0.68	1
Acrylonitrile	ND		ug/kg	4.2	1.2	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-04 Date Collected: 07/14/20 12:55

Client ID: B-4 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.0	0.18	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.1	0.34	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.1	0.29	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.1	0.20	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.1	0.35	1
1,4-Dioxane	ND		ug/kg	84	37.	1
p-Diethylbenzene	ND		ug/kg	2.1	0.19	1
p-Ethyltoluene	ND		ug/kg	2.1	0.40	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.1	0.20	1
Ethyl ether	ND		ug/kg	2.1	0.36	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.3	1.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	104		70-130

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05 Date Collected: 07/14/20 09:45

Client ID: B-1GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 07/15/20 09:30

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	22		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	1.2		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05 Date Collected: 07/14/20 09:45

Client ID: B-1GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	10		ug/l	5.0	1.5	1
Carbon disulfide	2.3	J	ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	12		ug/l	2.5	0.70	1
sec-Butylbenzene	8.6		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	2.4	J	ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05 Date Collected: 07/14/20 09:45

Client ID: B-1GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	60		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	14		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	94		70-130

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06 Date Collected: 07/14/20 11:15

Client ID: B-2GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 07/15/20 11:03

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	0.76		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06 Date Collected: 07/14/20 11:15

Client ID: B-2GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	4.8	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	2.3	J	ug/l	2.5	0.70	1
sec-Butylbenzene	15		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	1.1	J	ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06 Date Collected: 07/14/20 11:15

Client ID: B-2GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	1.5	J	ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	14		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	17		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	122		70-130
Dibromofluoromethane	93		70-130

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07 Date Collected: 07/14/20 12:10

Client ID: B-3GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 07/15/20 10:17

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	1.7		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07 Date Collected: 07/14/20 12:10

Client ID: B-3GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	12		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	0.74	J	ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07 Date Collected: 07/14/20 12:10

Client ID: B-3GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	94		70-130

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08 Date Collected: 07/14/20 13:15

Client ID: B-4GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 07/15/20 10:40

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	0.71	J	ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	2.3		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08 Date Collected: 07/14/20 13:15

Client ID: B-4GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	0.25	J	ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	7.4		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	1.3	J	ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08 Date Collected: 07/14/20 13:15

Client ID: B-4GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	95		70-130

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/15/20 07:50
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-04 Batch: WG1392438-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/15/20 07:50
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-04 Batch: WG1392438-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/15/20 07:50
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01-04 Batch: WG1392438-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	105		70-130

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/15/20 08:44
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 05-08 Batch: WG1392459-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/15/20 08:44
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 05-08 Batch: WG1392459-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 07/15/20 08:44
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 05-08 Batch: WG1392459-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	96		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1392438-3 WG1392438-4								
Methylene chloride	106		104		70-130	2		30
1,1-Dichloroethane	113		112		70-130	1		30
Chloroform	105		105		70-130	0		30
Carbon tetrachloride	106		108		70-130	2		30
1,2-Dichloropropane	115		115		70-130	0		30
Dibromochloromethane	102		101		70-130	1		30
1,1,2-Trichloroethane	108		107		70-130	1		30
Tetrachloroethene	96		97		70-130	1		30
Chlorobenzene	99		99		70-130	0		30
Trichlorofluoromethane	103		102		70-139	1		30
1,2-Dichloroethane	107		106		70-130	1		30
1,1,1-Trichloroethane	104		106		70-130	2		30
Bromodichloromethane	107		106		70-130	1		30
trans-1,3-Dichloropropene	115		115		70-130	0		30
cis-1,3-Dichloropropene	112		112		70-130	0		30
1,1-Dichloropropene	111		111		70-130	0		30
Bromoform	103		101		70-130	2		30
1,1,2,2-Tetrachloroethane	106		104		70-130	2		30
Benzene	105		104		70-130	1		30
Toluene	101		101		70-130	0		30
Ethylbenzene	101		101		70-130	0		30
Chloromethane	126		126		52-130	0		30
Bromomethane	82		89		57-147	8		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1392438-3 WG1392438-4								
Vinyl chloride	104		106		67-130	2		30
Chloroethane	99		98		50-151	1		30
1,1-Dichloroethene	91		89		65-135	2		30
trans-1,2-Dichloroethene	98		98		70-130	0		30
Trichloroethene	102		102		70-130	0		30
1,2-Dichlorobenzene	96		95		70-130	1		30
1,3-Dichlorobenzene	95		94		70-130	1		30
1,4-Dichlorobenzene	97		95		70-130	2		30
Methyl tert butyl ether	106		106		66-130	0		30
p/m-Xylene	102		102		70-130	0		30
o-Xylene	99		98		70-130	1		30
cis-1,2-Dichloroethene	108		105		70-130	3		30
Dibromomethane	106		107		70-130	1		30
Styrene	100		100		70-130	0		30
Dichlorodifluoromethane	140		139		30-146	1		30
Acetone	121		117		54-140	3		30
Carbon disulfide	92		90		59-130	2		30
2-Butanone	108		109		70-130	1		30
Vinyl acetate	126		126		70-130	0		30
4-Methyl-2-pentanone	104		102		70-130	2		30
1,2,3-Trichloropropane	112		104		68-130	7		30
2-Hexanone	100		100		70-130	0		30
Bromochloromethane	104		103		70-130	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1392438-3 WG1392438-4								
2,2-Dichloropropane	108		108		70-130	0		30
1,2-Dibromoethane	103		101		70-130	2		30
1,3-Dichloropropane	110		110		69-130	0		30
1,1,1,2-Tetrachloroethane	104		103		70-130	1		30
Bromobenzene	93		92		70-130	1		30
n-Butylbenzene	106		104		70-130	2		30
sec-Butylbenzene	98		96		70-130	2		30
tert-Butylbenzene	100		99		70-130	1		30
o-Chlorotoluene	102		100		70-130	2		30
p-Chlorotoluene	102		100		70-130	2		30
1,2-Dibromo-3-chloropropane	105		105		68-130	0		30
Hexachlorobutadiene	94		93		67-130	1		30
Isopropylbenzene	101		100		70-130	1		30
p-Isopropyltoluene	101		100		70-130	1		30
Naphthalene	95		96		70-130	1		30
Acrylonitrile	124		123		70-130	1		30
n-Propylbenzene	103		102		70-130	1		30
1,2,3-Trichlorobenzene	92		96		70-130	4		30
1,2,4-Trichlorobenzene	98		94		70-130	4		30
1,3,5-Trimethylbenzene	103		102		70-130	1		30
1,2,4-Trimethylbenzene	103		102		70-130	1		30
1,4-Dioxane	118		116		65-136	2		30
p-Diethylbenzene	99		97		70-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01-04 Batch: WG1392438-3 WG1392438-4								
p-Ethyltoluene	99		97		70-130	2		30
1,2,4,5-Tetramethylbenzene	99		97		70-130	2		30
Ethyl ether	100		96		67-130	4		30
trans-1,4-Dichloro-2-butene	120		117		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		106		70-130
Toluene-d8	101		101		70-130
4-Bromofluorobenzene	104		102		70-130
Dibromofluoromethane	104		101		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 05-08 Batch: WG1392459-3 WG1392459-4								
Methylene chloride	100		100		70-130	0		20
1,1-Dichloroethane	110		110		70-130	0		20
Chloroform	100		110		70-130	10		20
Carbon tetrachloride	94		94		63-132	0		20
1,2-Dichloropropane	110		120		70-130	9		20
Dibromochloromethane	92		94		63-130	2		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Tetrachloroethene	92		89		70-130	3		20
Chlorobenzene	100		100		75-130	0		20
Trichlorofluoromethane	100		100		62-150	0		20
1,2-Dichloroethane	110		110		70-130	0		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	100		100		67-130	0		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	110		110		70-130	0		20
Bromoform	86		85		54-136	1		20
1,1,2,2-Tetrachloroethane	110		120		67-130	9		20
Benzene	110		110		70-130	0		20
Toluene	100		100		70-130	0		20
Ethylbenzene	110		100		70-130	10		20
Chloromethane	120		120		64-130	0		20
Bromomethane	110		110		39-139	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 05-08 Batch: WG1392459-3 WG1392459-4								
Vinyl chloride	110		110		55-140	0		20
Chloroethane	110		110		55-138	0		20
1,1-Dichloroethene	100		100		61-145	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	100		100		70-130	0		20
1,2-Dichlorobenzene	100		100		70-130	0		20
1,3-Dichlorobenzene	100		99		70-130	1		20
1,4-Dichlorobenzene	100		99		70-130	1		20
Methyl tert butyl ether	99		100		63-130	1		20
p/m-Xylene	105		100		70-130	5		20
o-Xylene	105		100		70-130	5		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	100		100		70-130	0		20
1,2,3-Trichloropropane	120		120		64-130	0		20
Acrylonitrile	120		110		70-130	9		20
Styrene	105		100		70-130	5		20
Dichlorodifluoromethane	98		100		36-147	2		20
Acetone	120		110		58-148	9		20
Carbon disulfide	100		100		51-130	0		20
2-Butanone	120		120		63-138	0		20
Vinyl acetate	**140**	Q	**140**	Q	70-130	0		20
4-Methyl-2-pentanone	120		120		59-130	0		20
2-Hexanone	120		130		57-130	8		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 05-08 Batch: WG1392459-3 WG1392459-4								
Bromochloromethane	96		95		70-130	1		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	99		100		70-130	1		20
1,3-Dichloropropane	100		110		70-130	10		20
1,1,1,2-Tetrachloroethane	95		94		64-130	1		20
Bromobenzene	98		97		70-130	1		20
n-Butylbenzene	110		110		53-136	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	120		110		70-130	9		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	96		95		41-144	1		20
Hexachlorobutadiene	86		86		63-130	0		20
Isopropylbenzene	110		110		70-130	0		20
p-Isopropyltoluene	100		100		70-130	0		20
Naphthalene	110		110		70-130	0		20
n-Propylbenzene	110		110		69-130	0		20
1,2,3-Trichlorobenzene	100		100		70-130	0		20
1,2,4-Trichlorobenzene	96		96		70-130	0		20
1,3,5-Trimethylbenzene	110		110		64-130	0		20
1,2,4-Trimethylbenzene	110		110		70-130	0		20
1,4-Dioxane	112		102		56-162	9		20
p-Diethylbenzene	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 05-08 Batch: WG1392459-3 WG1392459-4								
p-Ethyltoluene	110		110		70-130	0		20
1,2,4,5-Tetramethylbenzene	100		100		70-130	0		20
Ethyl ether	100		100		59-134	0		20
trans-1,4-Dichloro-2-butene	110		110		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	111		110		70-130
Toluene-d8	104		104		70-130
4-Bromofluorobenzene	111		112		70-130
Dibromofluoromethane	98		97		70-130

SEMIVOLATILES

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-01
Client ID: B-1
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 09:30
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 07/15/20 11:34
Analyst: IM
Percent Solids: 96%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	18.	1
1,2,4-Trichlorobenzene	ND		ug/kg	170	19.	1
Hexachlorobenzene	ND		ug/kg	100	19.	1
Bis(2-chloroethyl)ether	ND		ug/kg	150	23.	1
2-Chloronaphthalene	ND		ug/kg	170	17.	1
1,2-Dichlorobenzene	ND		ug/kg	170	30.	1
1,3-Dichlorobenzene	ND		ug/kg	170	29.	1
1,4-Dichlorobenzene	ND		ug/kg	170	30.	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	45.	1
2,4-Dinitrotoluene	ND		ug/kg	170	34.	1
2,6-Dinitrotoluene	ND		ug/kg	170	29.	1
Fluoranthene	38	J	ug/kg	100	19.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	170	18.	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	26.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	29.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	180	17.	1
Hexachlorobutadiene	ND		ug/kg	170	25.	1
Hexachlorocyclopentadiene	ND		ug/kg	480	150	1
Hexachloroethane	ND		ug/kg	140	27.	1
Isophorone	ND		ug/kg	150	22.	1
Naphthalene	29	J	ug/kg	170	21.	1
Nitrobenzene	ND		ug/kg	150	25.	1
NDPA/DPA	ND		ug/kg	140	19.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	170	26.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	170	59.	1
Butyl benzyl phthalate	ND		ug/kg	170	43.	1
Di-n-butylphthalate	ND		ug/kg	170	32.	1
Di-n-octylphthalate	ND		ug/kg	170	58.	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-01 Date Collected: 07/14/20 09:30

Client ID: B-1 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	170	16.	1
Dimethyl phthalate	ND		ug/kg	170	36.	1
Benzo(a)anthracene	ND		ug/kg	100	19.	1
Benzo(a)pyrene	ND		ug/kg	140	41.	1
Benzo(b)fluoranthene	ND		ug/kg	100	28.	1
Benzo(k)fluoranthene	ND		ug/kg	100	27.	1
Chrysene	ND		ug/kg	100	18.	1
Acenaphthylene	ND		ug/kg	140	26.	1
Anthracene	91	J	ug/kg	100	33.	1
Benzo(ghi)perylene	ND		ug/kg	140	20.	1
Fluorene	ND		ug/kg	170	16.	1
Phenanthrene	120		ug/kg	100	21.	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	20.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	140	24.	1
Pyrene	200		ug/kg	100	17.	1
Biphenyl	ND		ug/kg	390	39.	1
4-Chloroaniline	ND		ug/kg	170	31.	1
2-Nitroaniline	ND		ug/kg	170	33.	1
3-Nitroaniline	ND		ug/kg	170	32.	1
4-Nitroaniline	ND		ug/kg	170	70.	1
Dibenzofuran	ND		ug/kg	170	16.	1
2-Methylnaphthalene	ND		ug/kg	200	20.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	170	18.	1
Acetophenone	ND		ug/kg	170	21.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	32.	1
p-Chloro-m-cresol	ND		ug/kg	170	25.	1
2-Chlorophenol	ND		ug/kg	170	20.	1
2,4-Dichlorophenol	ND		ug/kg	150	27.	1
2,4-Dimethylphenol	ND		ug/kg	170	56.	1
2-Nitrophenol	ND		ug/kg	370	64.	1
4-Nitrophenol	ND		ug/kg	240	69.	1
2,4-Dinitrophenol	ND		ug/kg	810	79.	1
4,6-Dinitro-o-cresol	ND		ug/kg	440	81.	1
Pentachlorophenol	ND		ug/kg	140	37.	1
Phenol	ND		ug/kg	170	26.	1
2-Methylphenol	ND		ug/kg	170	26.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	26.	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-01 Date Collected: 07/14/20 09:30

Client ID: B-1 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	170	32.	1
Benzoic Acid	ND		ug/kg	550	170	1
Benzyl Alcohol	ND		ug/kg	170	52.	1
Carbazole	ND		ug/kg	170	16.	1
1,4-Dioxane	ND		ug/kg	25	7.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	75		25-120
Phenol-d6	79		10-120
Nitrobenzene-d5	60		23-120
2-Fluorobiphenyl	59		30-120
2,4,6-Tribromophenol	67		10-136
4-Terphenyl-d14	69		18-120

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-02
Client ID: B-2
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 11:00
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 07/15/20 11:58
Analyst: IM
Percent Solids: 97%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	18.	1
1,2,4-Trichlorobenzene	ND		ug/kg	170	19.	1
Hexachlorobenzene	ND		ug/kg	100	19.	1
Bis(2-chloroethyl)ether	ND		ug/kg	150	23.	1
2-Chloronaphthalene	ND		ug/kg	170	17.	1
1,2-Dichlorobenzene	ND		ug/kg	170	30.	1
1,3-Dichlorobenzene	ND		ug/kg	170	29.	1
1,4-Dichlorobenzene	ND		ug/kg	170	30.	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	45.	1
2,4-Dinitrotoluene	ND		ug/kg	170	34.	1
2,6-Dinitrotoluene	ND		ug/kg	170	29.	1
Fluoranthene	ND		ug/kg	100	19.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	170	18.	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	26.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	29.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	180	17.	1
Hexachlorobutadiene	ND		ug/kg	170	25.	1
Hexachlorocyclopentadiene	ND		ug/kg	480	150	1
Hexachloroethane	ND		ug/kg	140	27.	1
Isophorone	ND		ug/kg	150	22.	1
Naphthalene	ND		ug/kg	170	20.	1
Nitrobenzene	ND		ug/kg	150	25.	1
NDPA/DPA	ND		ug/kg	140	19.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	170	26.	1
Bis(2-ethylhexyl)phthalate	88	J	ug/kg	170	58.	1
Butyl benzyl phthalate	ND		ug/kg	170	42.	1
Di-n-butylphthalate	ND		ug/kg	170	32.	1
Di-n-octylphthalate	ND		ug/kg	170	57.	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-02 Date Collected: 07/14/20 11:00

Client ID: B-2 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	170	16.	1
Dimethyl phthalate	ND		ug/kg	170	35.	1
Benzo(a)anthracene	ND		ug/kg	100	19.	1
Benzo(a)pyrene	ND		ug/kg	140	41.	1
Benzo(b)fluoranthene	ND		ug/kg	100	28.	1
Benzo(k)fluoranthene	ND		ug/kg	100	27.	1
Chrysene	ND		ug/kg	100	18.	1
Acenaphthylene	ND		ug/kg	140	26.	1
Anthracene	ND		ug/kg	100	33.	1
Benzo(ghi)perylene	ND		ug/kg	140	20.	1
Fluorene	ND		ug/kg	170	16.	1
Phenanthrene	ND		ug/kg	100	20.	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	20.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	140	24.	1
Pyrene	ND		ug/kg	100	17.	1
Biphenyl	ND		ug/kg	380	39.	1
4-Chloroaniline	ND		ug/kg	170	31.	1
2-Nitroaniline	ND		ug/kg	170	32.	1
3-Nitroaniline	ND		ug/kg	170	32.	1
4-Nitroaniline	ND		ug/kg	170	70.	1
Dibenzofuran	ND		ug/kg	170	16.	1
2-Methylnaphthalene	ND		ug/kg	200	20.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	170	18.	1
Acetophenone	ND		ug/kg	170	21.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	32.	1
p-Chloro-m-cresol	ND		ug/kg	170	25.	1
2-Chlorophenol	ND		ug/kg	170	20.	1
2,4-Dichlorophenol	ND		ug/kg	150	27.	1
2,4-Dimethylphenol	ND		ug/kg	170	56.	1
2-Nitrophenol	ND		ug/kg	360	64.	1
4-Nitrophenol	ND		ug/kg	240	69.	1
2,4-Dinitrophenol	ND		ug/kg	810	79.	1
4,6-Dinitro-o-cresol	ND		ug/kg	440	81.	1
Pentachlorophenol	ND		ug/kg	140	37.	1
Phenol	ND		ug/kg	170	26.	1
2-Methylphenol	ND		ug/kg	170	26.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	26.	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-02 Date Collected: 07/14/20 11:00

Client ID: B-2 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	170	32.	1
Benzoic Acid	ND		ug/kg	550	170	1
Benzyl Alcohol	ND		ug/kg	170	52.	1
Carbazole	ND		ug/kg	170	16.	1
1,4-Dioxane	ND		ug/kg	25	7.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	97		25-120
Phenol-d6	101		10-120
Nitrobenzene-d5	98		23-120
2-Fluorobiphenyl	78		30-120
2,4,6-Tribromophenol	90		10-136
4-Terphenyl-d14	95		18-120

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-03
Client ID: B-3
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:00
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 07/15/20 12:22
Analyst: IM
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	18.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	20.	1
Hexachlorobenzene	ND		ug/kg	100	20.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	24.	1
2-Chloronaphthalene	ND		ug/kg	180	17.	1
1,2-Dichlorobenzene	ND		ug/kg	180	31.	1
1,3-Dichlorobenzene	ND		ug/kg	180	30.	1
1,4-Dichlorobenzene	ND		ug/kg	180	30.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	46.	1
2,4-Dinitrotoluene	ND		ug/kg	180	35.	1
2,6-Dinitrotoluene	ND		ug/kg	180	30.	1
Fluoranthene	ND		ug/kg	100	20.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	19.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	27.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	30.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	18.	1
Hexachlorobutadiene	ND		ug/kg	180	26.	1
Hexachlorocyclopentadiene	ND		ug/kg	500	160	1
Hexachloroethane	ND		ug/kg	140	28.	1
Isophorone	ND		ug/kg	160	23.	1
Naphthalene	ND		ug/kg	180	21.	1
Nitrobenzene	ND		ug/kg	160	26.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	27.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	180	61.	1
Butyl benzyl phthalate	ND		ug/kg	180	44.	1
Di-n-butylphthalate	ND		ug/kg	180	33.	1
Di-n-octylphthalate	ND		ug/kg	180	60.	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-03 Date Collected: 07/14/20 12:00

Client ID: B-3 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	180	16.	1
Dimethyl phthalate	ND		ug/kg	180	37.	1
Benzo(a)anthracene	ND		ug/kg	100	20.	1
Benzo(a)pyrene	ND		ug/kg	140	43.	1
Benzo(b)fluoranthene	ND		ug/kg	100	29.	1
Benzo(k)fluoranthene	ND		ug/kg	100	28.	1
Chrysene	ND		ug/kg	100	18.	1
Acenaphthylene	ND		ug/kg	140	27.	1
Anthracene	ND		ug/kg	100	34.	1
Benzo(ghi)perylene	ND		ug/kg	140	20.	1
Fluorene	ND		ug/kg	180	17.	1
Phenanthrene	ND		ug/kg	100	21.	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	20.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	140	24.	1
Pyrene	17	J	ug/kg	100	17.	1
Biphenyl	ND		ug/kg	400	41.	1
4-Chloroaniline	ND		ug/kg	180	32.	1
2-Nitroaniline	ND		ug/kg	180	34.	1
3-Nitroaniline	ND		ug/kg	180	33.	1
4-Nitroaniline	ND		ug/kg	180	72.	1
Dibenzofuran	ND		ug/kg	180	16.	1
2-Methylnaphthalene	ND		ug/kg	210	21.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	18.	1
Acetophenone	ND		ug/kg	180	22.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	33.	1
p-Chloro-m-cresol	ND		ug/kg	180	26.	1
2-Chlorophenol	ND		ug/kg	180	21.	1
2,4-Dichlorophenol	ND		ug/kg	160	28.	1
2,4-Dimethylphenol	ND		ug/kg	180	58.	1
2-Nitrophenol	ND		ug/kg	380	66.	1
4-Nitrophenol	ND		ug/kg	240	71.	1
2,4-Dinitrophenol	ND		ug/kg	840	82.	1
4,6-Dinitro-o-cresol	ND		ug/kg	460	84.	1
Pentachlorophenol	ND		ug/kg	140	38.	1
Phenol	ND		ug/kg	180	26.	1
2-Methylphenol	ND		ug/kg	180	27.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	27.	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-03 Date Collected: 07/14/20 12:00

Client ID: B-3 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	180	34.	1
Benzoic Acid	ND		ug/kg	570	180	1
Benzyl Alcohol	ND		ug/kg	180	54.	1
Carbazole	ND		ug/kg	180	17.	1
1,4-Dioxane	ND		ug/kg	26	8.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		25-120
Phenol-d6	84		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	67		30-120
2,4,6-Tribromophenol	76		10-136
4-Terphenyl-d14	66		18-120

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-04
Client ID: B-4
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:55
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 07/15/20 13:10
Analyst: IM
Percent Solids: 98%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	130	17.	1
1,2,4-Trichlorobenzene	ND		ug/kg	170	19.	1
Hexachlorobenzene	ND		ug/kg	100	19.	1
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.	1
2-Chloronaphthalene	ND		ug/kg	170	16.	1
1,2-Dichlorobenzene	ND		ug/kg	170	30.	1
1,3-Dichlorobenzene	ND		ug/kg	170	29.	1
1,4-Dichlorobenzene	ND		ug/kg	170	29.	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	44.	1
2,4-Dinitrotoluene	ND		ug/kg	170	33.	1
2,6-Dinitrotoluene	ND		ug/kg	170	28.	1
Fluoranthene	ND		ug/kg	100	19.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	170	18.	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	25.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	28.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	180	17.	1
Hexachlorobutadiene	ND		ug/kg	170	24.	1
Hexachlorocyclopentadiene	ND		ug/kg	480	150	1
Hexachloroethane	ND		ug/kg	130	27.	1
Isophorone	ND		ug/kg	150	22.	1
Naphthalene	ND		ug/kg	170	20.	1
Nitrobenzene	ND		ug/kg	150	25.	1
NDPA/DPA	ND		ug/kg	130	19.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	170	26.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	170	58.	1
Butyl benzyl phthalate	ND		ug/kg	170	42.	1
Di-n-butylphthalate	ND		ug/kg	170	32.	1
Di-n-octylphthalate	ND		ug/kg	170	56.	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-04 Date Collected: 07/14/20 12:55

Client ID: B-4 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	170	15.	1
Dimethyl phthalate	ND		ug/kg	170	35.	1
Benzo(a)anthracene	ND		ug/kg	100	19.	1
Benzo(a)pyrene	ND		ug/kg	130	41.	1
Benzo(b)fluoranthene	ND		ug/kg	100	28.	1
Benzo(k)fluoranthene	ND		ug/kg	100	27.	1
Chrysene	ND		ug/kg	100	17.	1
Acenaphthylene	ND		ug/kg	130	26.	1
Anthracene	ND		ug/kg	100	32.	1
Benzo(ghi)perylene	ND		ug/kg	130	20.	1
Fluorene	ND		ug/kg	170	16.	1
Phenanthrene	ND		ug/kg	100	20.	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	19.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.	1
Pyrene	ND		ug/kg	100	16.	1
Biphenyl	ND		ug/kg	380	39.	1
4-Chloroaniline	ND		ug/kg	170	30.	1
2-Nitroaniline	ND		ug/kg	170	32.	1
3-Nitroaniline	ND		ug/kg	170	31.	1
4-Nitroaniline	ND		ug/kg	170	69.	1
Dibenzofuran	ND		ug/kg	170	16.	1
2-Methylnaphthalene	ND		ug/kg	200	20.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	170	17.	1
Acetophenone	ND		ug/kg	170	21.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	32.	1
p-Chloro-m-cresol	ND		ug/kg	170	25.	1
2-Chlorophenol	ND		ug/kg	170	20.	1
2,4-Dichlorophenol	ND		ug/kg	150	27.	1
2,4-Dimethylphenol	ND		ug/kg	170	55.	1
2-Nitrophenol	ND		ug/kg	360	62.	1
4-Nitrophenol	ND		ug/kg	230	68.	1
2,4-Dinitrophenol	ND		ug/kg	800	78.	1
4,6-Dinitro-o-cresol	ND		ug/kg	430	80.	1
Pentachlorophenol	ND		ug/kg	130	37.	1
Phenol	ND		ug/kg	170	25.	1
2-Methylphenol	ND		ug/kg	170	26.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	26.	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-04 Date Collected: 07/14/20 12:55

Client ID: B-4 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	170	32.	1
Benzoic Acid	ND		ug/kg	540	170	1
Benzyl Alcohol	ND		ug/kg	170	51.	1
Carbazole	ND		ug/kg	170	16.	1
1,4-Dioxane	ND		ug/kg	25	7.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	103		25-120
Phenol-d6	105		10-120
Nitrobenzene-d5	93		23-120
2-Fluorobiphenyl	83		30-120
2,4,6-Tribromophenol	97		10-136
4-Terphenyl-d14	80		18-120

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05
Client ID: B-1GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 09:45
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 07/15/20 10:37
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:09

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	7.1		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05 Date Collected: 07/14/20 09:45

Client ID: B-1GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		21-120
Phenol-d6	62		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	57		15-120
2,4,6-Tribromophenol	87		10-120
4-Terphenyl-d14	75		41-149

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05
Client ID: B-1GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 09:45
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 07/15/20 12:28
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.06	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.04	J	ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	1.3		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	0.05	J	ug/l	0.10	0.01	1
Anthracene	0.13		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	0.09	J	ug/l	0.10	0.01	1
Phenanthrene	0.62		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.11		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05 Date Collected: 07/14/20 09:45

Client ID: B-1GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		21-120
Phenol-d6	53		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	81		15-120
2,4,6-Tribromophenol	109		10-120
4-Terphenyl-d14	103		41-149

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06
Client ID: B-2GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 11:15
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 07/15/20 11:00
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	2.1	J	ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	1.3	J	ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06 Date Collected: 07/14/20 11:15

Client ID: B-2GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		21-120
Phenol-d6	79		10-120
Nitrobenzene-d5	93		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	107		10-120
4-Terphenyl-d14	93		41-149

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06
Client ID: B-2GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 11:15
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 07/15/20 12:49
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.04	J	ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.11		ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.79		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.05	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.04	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.06	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Chrysene	0.06	J	ug/l	0.10	0.01	1
Acenaphthylene	0.04	J	ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.08	J	ug/l	0.10	0.01	1
Fluorene	0.20		ug/l	0.10	0.01	1
Phenanthrene	0.35		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	0.45		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06 Date Collected: 07/14/20 11:15

Client ID: B-2GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		21-120
Phenol-d6	69		10-120
Nitrobenzene-d5	105		23-120
2-Fluorobiphenyl	105		15-120
2,4,6-Tribromophenol	**129**	Q	10-120
4-Terphenyl-d14	126		41-149

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07
Client ID: B-3GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:10
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 07/15/20 11:23
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	0.40	J	ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07 Date Collected: 07/14/20 12:10

Client ID: B-3GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		21-120
Phenol-d6	51		10-120
Nitrobenzene-d5	57		23-120
2-Fluorobiphenyl	50		15-120
2,4,6-Tribromophenol	69		10-120
4-Terphenyl-d14	58		41-149

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07
Client ID: B-3GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:10
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 07/15/20 13:09
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.10	J	ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.16		ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	0.01	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.08	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.19		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01	1
Pyrene	0.22		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	0.32	J	ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07 Date Collected: 07/14/20 12:10

Client ID: B-3GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		21-120
Phenol-d6	45		10-120
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	87		10-120
4-Terphenyl-d14	87		41-149

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08
Client ID: B-4GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 13:15
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 07/15/20 11:45
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	0.56	J	ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08 Date Collected: 07/14/20 13:15

Client ID: B-4GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		21-120
Phenol-d6	55		10-120
Nitrobenzene-d5	70		23-120
2-Fluorobiphenyl	52		15-120
2,4,6-Tribromophenol	74		10-120
4-Terphenyl-d14	65		41-149

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08
Client ID: B-4GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 13:15
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 07/15/20 13:30
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:11

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.05	J	ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.02	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.04	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.06	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Chrysene	0.03	J	ug/l	0.10	0.01	1
Acenaphthylene	0.01	J	ug/l	0.10	0.01	1
Anthracene	0.03	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.04	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.04	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.03	J	ug/l	0.10	0.01	1
Pyrene	0.14		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08 Date Collected: 07/14/20 13:15

Client ID: B-4GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		21-120
Phenol-d6	48		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	81		15-120
2,4,6-Tribromophenol	97		10-120
4-Terphenyl-d14	99		41-149

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/15/20 12:53
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/14/20 16:45

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 05-08 Batch: WG1392096-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Fluoranthene	ND		ug/l	2.0	0.26
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.66
Hexachlorocyclopentadiene	ND		ug/l	20	0.69
Hexachloroethane	ND		ug/l	2.0	0.58
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
NDPA/DPA	ND		ug/l	2.0	0.42
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/15/20 12:53
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/14/20 16:45

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 05-08 Batch: WG1392096-1					
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Biphenyl	ND		ug/l	2.0	0.46
4-Chloroaniline	ND		ug/l	5.0	1.1
2-Nitroaniline	ND		ug/l	5.0	0.50
3-Nitroaniline	ND		ug/l	5.0	0.81
4-Nitroaniline	ND		ug/l	5.0	0.80
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/15/20 12:53
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/14/20 16:45

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 05-08 Batch: WG1392096-1					
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Benzoic Acid	ND		ug/l	50	2.6
Benzyl Alcohol	ND		ug/l	2.0	0.59
Carbazole	ND		ug/l	2.0	0.49

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		21-120
Phenol-d6	43		10-120
Nitrobenzene-d5	77		23-120
2-Fluorobiphenyl	50		15-120
2,4,6-Tribromophenol	50		10-120
4-Terphenyl-d14	63		41-149

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 07/15/20 11:27
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/14/20 16:54

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 05-08 Batch: WG1392101-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.02
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	0.03	J	ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.01
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 07/15/20 11:27
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/14/20 16:54

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 05-08 Batch: WG1392101-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	78		15-120
2,4,6-Tribromophenol	81		10-120
4-Terphenyl-d14	99		41-149

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/15/20 09:35
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:47

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1392253-1					
Acenaphthene	ND		ug/kg	130	17.
1,2,4-Trichlorobenzene	ND		ug/kg	160	19.
Hexachlorobenzene	ND		ug/kg	98	18.
Bis(2-chloroethyl)ether	ND		ug/kg	150	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
1,2-Dichlorobenzene	ND		ug/kg	160	29.
1,3-Dichlorobenzene	ND		ug/kg	160	28.
1,4-Dichlorobenzene	ND		ug/kg	160	28.
3,3'-Dichlorobenzidine	ND		ug/kg	160	44.
2,4-Dinitrotoluene	ND		ug/kg	160	33.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	98	19.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	18.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	180	16.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	470	150
Hexachloroethane	ND		ug/kg	130	26.
Isophorone	ND		ug/kg	150	21.
Naphthalene	ND		ug/kg	160	20.
Nitrobenzene	ND		ug/kg	150	24.
NDPA/DPA	ND		ug/kg	130	19.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	25.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	57.
Butyl benzyl phthalate	ND		ug/kg	160	41.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	56.
Diethyl phthalate	ND		ug/kg	160	15.

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/15/20 09:35
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:47

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1392253-1					
Dimethyl phthalate	ND		ug/kg	160	34.
Benzo(a)anthracene	ND		ug/kg	98	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	28.
Benzo(k)fluoranthene	ND		ug/kg	98	26.
Chrysene	ND		ug/kg	98	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	98	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	98	20.
Dibenzo(a,h)anthracene	ND		ug/kg	98	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	98	16.
Biphenyl	ND		ug/kg	370	38.
4-Chloroaniline	ND		ug/kg	160	30.
2-Nitroaniline	ND		ug/kg	160	32.
3-Nitroaniline	ND		ug/kg	160	31.
4-Nitroaniline	ND		ug/kg	160	68.
Dibenzofuran	ND		ug/kg	160	15.
2-Methylnaphthalene	ND		ug/kg	200	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	98	31.
p-Chloro-m-cresol	ND		ug/kg	160	24.
2-Chlorophenol	ND		ug/kg	160	19.
2,4-Dichlorophenol	ND		ug/kg	150	26.
2,4-Dimethylphenol	ND		ug/kg	160	54.
2-Nitrophenol	ND		ug/kg	350	62.

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 07/15/20 09:35
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:47

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1392253-1					
4-Nitrophenol	ND		ug/kg	230	67.
2,4-Dinitrophenol	ND		ug/kg	780	76.
4,6-Dinitro-o-cresol	ND		ug/kg	420	78.
Pentachlorophenol	ND		ug/kg	130	36.
Phenol	ND		ug/kg	160	25.
2-Methylphenol	ND		ug/kg	160	25.
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	26.
2,4,5-Trichlorophenol	ND		ug/kg	160	31.
Benzoic Acid	ND		ug/kg	530	160
Benzyl Alcohol	ND		ug/kg	160	50.
Carbazole	ND		ug/kg	160	16.
1,4-Dioxane	ND		ug/kg	24	7.5

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		25-120
Phenol-d6	83		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	70		30-120
2,4,6-Tribromophenol	80		10-136
4-Terphenyl-d14	80		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 05-08 Batch: WG1392096-2 WG1392096-3								
Acenaphthene	74		52		37-111	**35**	Q	30
1,2,4-Trichlorobenzene	66		47		39-98	**34**	Q	30
Hexachlorobenzene	59		42		40-140	**34**	Q	30
Bis(2-chloroethyl)ether	83		60		40-140	**32**	Q	30
2-Chloronaphthalene	67		46		40-140	**37**	Q	30
1,2-Dichlorobenzene	69		50		40-140	**32**	Q	30
1,3-Dichlorobenzene	67		48		40-140	**33**	Q	30
1,4-Dichlorobenzene	68		50		36-97	**31**	Q	30
3,3'-Dichlorobenzidine	73		50		40-140	**37**	Q	30
2,4-Dinitrotoluene	84		61		48-143	**32**	Q	30
2,6-Dinitrotoluene	81		52		40-140	**44**	Q	30
Fluoranthene	68		48		40-140	**34**	Q	30
4-Chlorophenyl phenyl ether	67		47		40-140	**35**	Q	30
4-Bromophenyl phenyl ether	63		44		40-140	**36**	Q	30
Bis(2-chloroisopropyl)ether	107		75		40-140	**35**	Q	30
Bis(2-chloroethoxy)methane	81		55		40-140	**38**	Q	30
Hexachlorobutadiene	61		43		40-140	**35**	Q	30
Hexachlorocyclopentadiene	63		42		40-140	**40**	Q	30
Hexachloroethane	77		54		40-140	**35**	Q	30
Isophorone	84		57		40-140	**38**	Q	30
Naphthalene	69		49		40-140	**34**	Q	30
Nitrobenzene	96		66		40-140	**37**	Q	30
NDPA/DPA	69		48		40-140	**36**	Q	30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 05-08 Batch: WG1392096-2 WG1392096-3								
n-Nitrosodi-n-propylamine	90		62		29-132	**37**	Q	30
Bis(2-ethylhexyl)phthalate	119		68		40-140	**55**	Q	30
Butyl benzyl phthalate	95		63		40-140	**41**	Q	30
Di-n-butylphthalate	84		56		40-140	**40**	Q	30
Di-n-octylphthalate	116		68		40-140	**52**	Q	30
Diethyl phthalate	79		55		40-140	**36**	Q	30
Dimethyl phthalate	69		46		40-140	**40**	Q	30
Benzo(a)anthracene	84		59		40-140	**35**	Q	30
Benzo(a)pyrene	78		57		40-140	**31**	Q	30
Benzo(b)fluoranthene	86		56		40-140	**42**	Q	30
Benzo(k)fluoranthene	75		60		40-140	22		30
Chrysene	82		62		40-140	28		30
Acenaphthylene	67		45		45-123	**39**	Q	30
Anthracene	75		54		40-140	**33**	Q	30
Benzo(ghi)perylene	85		63		40-140	30		30
Fluorene	71		49		40-140	**37**	Q	30
Phenanthrene	74		53		40-140	**33**	Q	30
Dibenzo(a,h)anthracene	87		65		40-140	29		30
Indeno(1,2,3-cd)pyrene	84		63		40-140	29		30
Pyrene	68		49		26-127	**32**	Q	30
Biphenyl	73		50		40-140	**37**	Q	30
4-Chloroaniline	72		50		40-140	**36**	Q	30
2-Nitroaniline	82		56		52-143	**38**	Q	30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 05-08 Batch: WG1392096-2 WG1392096-3								
3-Nitroaniline	75		54		25-145	**33**	Q	30
4-Nitroaniline	65		**48**	Q	51-143	30		30
Dibenzofuran	69		48		40-140	**36**	Q	30
2-Methylnaphthalene	67		46		40-140	**37**	Q	30
1,2,4,5-Tetrachlorobenzene	65		45		2-134	**36**	Q	30
Acetophenone	80		56		39-129	**35**	Q	30
2,4,6-Trichlorophenol	68		46		30-130	**39**	Q	30
p-Chloro-m-cresol	78		52		23-97	**40**	Q	30
2-Chlorophenol	75		54		27-123	**33**	Q	30
2,4-Dichlorophenol	76		51		30-130	**39**	Q	30
2,4-Dimethylphenol	69		46		30-130	**40**	Q	30
2-Nitrophenol	99		66		30-130	**40**	Q	30
4-Nitrophenol	**90**	Q	61		10-80	**38**	Q	30
2,4-Dinitrophenol	84		45		20-130	**60**	Q	30
4,6-Dinitro-o-cresol	94		65		20-164	**36**	Q	30
Pentachlorophenol	71		45		9-103	**45**	Q	30
Phenol	57		41		12-110	**33**	Q	30
2-Methylphenol	73		51		30-130	**35**	Q	30
3-Methylphenol/4-Methylphenol	81		57		30-130	**35**	Q	30
2,4,5-Trichlorophenol	69		46		30-130	**40**	Q	30
Benzoic Acid	46		**0**	Q	10-164	NC		30
Benzyl Alcohol	75		54		26-116	**33**	Q	30
Carbazole	71		**51**	Q	55-144	**33**	Q	30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 05-08 Batch: WG1392096-2 WG1392096-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	65		48		21-120
Phenol-d6	59		42		10-120
Nitrobenzene-d5	105		75		23-120
2-Fluorobiphenyl	65		43		15-120
2,4,6-Tribromophenol	68		45		10-120
4-Terphenyl-d14	68		48		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 05-08 Batch: WG1392101-2 WG1392101-3								
Acenaphthene	74		72		40-140	3		40
2-Chloronaphthalene	88		85		40-140	3		40
Fluoranthene	93		88		40-140	6		40
Hexachlorobutadiene	95		94		40-140	1		40
Naphthalene	70		69		40-140	1		40
Benzo(a)anthracene	79		76		40-140	4		40
Benzo(a)pyrene	93		90		40-140	3		40
Benzo(b)fluoranthene	87		80		40-140	8		40
Benzo(k)fluoranthene	101		98		40-140	3		40
Chrysene	94		88		40-140	7		40
Acenaphthylene	97		94		40-140	3		40
Anthracene	85		82		40-140	4		40
Benzo(ghi)perylene	88		83		40-140	6		40
Fluorene	81		76		40-140	6		40
Phenanthrene	73		70		40-140	4		40
Dibenzo(a,h)anthracene	92		87		40-140	6		40
Indeno(1,2,3-cd)pyrene	86		83		40-140	4		40
Pyrene	94		89		40-140	5		40
2-Methylnaphthalene	79		76		40-140	4		40
Pentachlorophenol	60		78		40-140	26		40
Hexachlorobenzene	90		82		40-140	9		40
Hexachloroethane	73		69		40-140	6		40

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1
Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 05-08 Batch: WG1392101-2 WG1392101-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	45		46		21-120
Phenol-d6	45		45		10-120
Nitrobenzene-d5	77		74		23-120
2-Fluorobiphenyl	92		88		15-120
2,4,6-Tribromophenol	103		99		10-120
4-Terphenyl-d14	113		110		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1392253-2 WG1392253-3								
Acenaphthene	71		68		31-137	4		50
1,2,4-Trichlorobenzene	65		65		38-107	0		50
Hexachlorobenzene	73		65		40-140	12		50
Bis(2-chloroethyl)ether	71		70		40-140	1		50
2-Chloronaphthalene	67		66		40-140	2		50
1,2-Dichlorobenzene	64		64		40-140	0		50
1,3-Dichlorobenzene	62		63		40-140	2		50
1,4-Dichlorobenzene	62		62		28-104	0		50
3,3'-Dichlorobenzidine	68		66		40-140	3		50
2,4-Dinitrotoluene	73		64		40-132	13		50
2,6-Dinitrotoluene	71		70		40-140	1		50
Fluoranthene	72		67		40-140	7		50
4-Chlorophenyl phenyl ether	66		62		40-140	6		50
4-Bromophenyl phenyl ether	63		58		40-140	8		50
Bis(2-chloroisopropyl)ether	58		57		40-140	2		50
Bis(2-chloroethoxy)methane	75		73		40-117	3		50
Hexachlorobutadiene	68		68		40-140	0		50
Hexachlorocyclopentadiene	67		66		40-140	2		50
Hexachloroethane	74		71		40-140	4		50
Isophorone	88		84		40-140	5		50
Naphthalene	68		66		40-140	3		50
Nitrobenzene	83		79		40-140	5		50
NDPA/DPA	70		66		36-157	6		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1392253-2 WG1392253-3								
n-Nitrosodi-n-propylamine	90		88		32-121	2		50
Bis(2-ethylhexyl)phthalate	86		84		40-140	2		50
Butyl benzyl phthalate	83		78		40-140	6		50
Di-n-butylphthalate	79		77		40-140	3		50
Di-n-octylphthalate	89		85		40-140	5		50
Diethyl phthalate	75		69		40-140	8		50
Dimethyl phthalate	73		68		40-140	7		50
Benzo(a)anthracene	66		63		40-140	5		50
Benzo(a)pyrene	65		66		40-140	2		50
Benzo(b)fluoranthene	63		62		40-140	2		50
Benzo(k)fluoranthene	77		75		40-140	3		50
Chrysene	75		73		40-140	3		50
Acenaphthylene	74		72		40-140	3		50
Anthracene	68		67		40-140	1		50
Benzo(ghi)perylene	68		70		40-140	3		50
Fluorene	72		68		40-140	6		50
Phenanthrene	66		64		40-140	3		50
Dibenzo(a,h)anthracene	67		66		40-140	2		50
Indeno(1,2,3-cd)pyrene	66		65		40-140	2		50
Pyrene	70		68		35-142	3		50
Biphenyl	67		64		37-127	5		50
4-Chloroaniline	81		84		40-140	4		50
2-Nitroaniline	70		65		47-134	7		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1392253-2 WG1392253-3								
3-Nitroaniline	63		58		26-129	8		50
4-Nitroaniline	58		50		41-125	15		50
Dibenzofuran	68		65		40-140	5		50
2-Methylnaphthalene	64		62		40-140	3		50
1,2,4,5-Tetrachlorobenzene	66		66		40-117	0		50
Acetophenone	71		70		14-144	1		50
2,4,6-Trichlorophenol	71		65		30-130	9		50
p-Chloro-m-cresol	76		72		26-103	5		50
2-Chlorophenol	71		69		25-102	3		50
2,4-Dichlorophenol	70		68		30-130	3		50
2,4-Dimethylphenol	80		82		30-130	2		50
2-Nitrophenol	69		66		30-130	4		50
4-Nitrophenol	83		71		11-114	16		50
2,4-Dinitrophenol	49		51		4-130	4		50
4,6-Dinitro-o-cresol	61		54		10-130	12		50
Pentachlorophenol	61		60		17-109	2		50
Phenol	82		80		26-90	2		50
2-Methylphenol	73		72		30-130.	1		50
3-Methylphenol/4-Methylphenol	80		79		30-130	1		50
2,4,5-Trichlorophenol	72		70		30-130	3		50
Benzoic Acid	36		40		10-110	11		50
Benzyl Alcohol	85		84		40-140	1		50
Carbazole	70		68		54-128	3		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1392253-2 WG1392253-3								
1,4-Dioxane	59		62		40-140	5		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	80		78		25-120
Phenol-d6	85		82		10-120
Nitrobenzene-d5	84		85		23-120
2-Fluorobiphenyl	69		67		30-120
2,4,6-Tribromophenol	82		75		10-136
4-Terphenyl-d14	75		75		18-120

PCBS

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-01
Client ID: B-1
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 09:30
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/15/20 12:32
Analyst: JM
Percent Solids: 96%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:50
Cleanup Method: EPA 3665A
Cleanup Date: 07/15/20
Cleanup Method: EPA 3660B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	33.6	2.98	1	A
Aroclor 1221	ND		ug/kg	33.6	3.36	1	A
Aroclor 1232	ND		ug/kg	33.6	7.12	1	A
Aroclor 1242	ND		ug/kg	33.6	4.52	1	A
Aroclor 1248	ND		ug/kg	33.6	5.03	1	A
Aroclor 1254	ND		ug/kg	33.6	3.67	1	A
Aroclor 1260	ND		ug/kg	33.6	6.20	1	A
Aroclor 1262	ND		ug/kg	33.6	4.26	1	A
Aroclor 1268	ND		ug/kg	33.6	3.48	1	A
PCBs, Total	ND		ug/kg	33.6	2.98	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	92		30-150	A
2,4,5,6-Tetrachloro-m-xylene	99		30-150	B
Decachlorobiphenyl	91		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-02
Client ID: B-2
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 11:00
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/15/20 12:39
Analyst: JM
Percent Solids: 97%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:50
Cleanup Method: EPA 3665A
Cleanup Date: 07/15/20
Cleanup Method: EPA 3660B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	32.5	2.88	1	A
Aroclor 1221	ND		ug/kg	32.5	3.26	1	A
Aroclor 1232	ND		ug/kg	32.5	6.89	1	A
Aroclor 1242	ND		ug/kg	32.5	4.38	1	A
Aroclor 1248	6.52	J	ug/kg	32.5	4.87	1	B
Aroclor 1254	ND		ug/kg	32.5	3.55	1	A
Aroclor 1260	ND		ug/kg	32.5	6.00	1	A
Aroclor 1262	ND		ug/kg	32.5	4.12	1	A
Aroclor 1268	ND		ug/kg	32.5	3.36	1	A
PCBs, Total	6.52	J	ug/kg	32.5	2.88	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	83		30-150	B
Decachlorobiphenyl	75		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-03
Client ID: B-3
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:00
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/15/20 12:46
Analyst: JM
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:50
Cleanup Method: EPA 3665A
Cleanup Date: 07/15/20
Cleanup Method: EPA 3660B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	33.9	3.01	1	A
Aroclor 1221	ND		ug/kg	33.9	3.40	1	A
Aroclor 1232	ND		ug/kg	33.9	7.18	1	A
Aroclor 1242	ND		ug/kg	33.9	4.57	1	A
Aroclor 1248	ND		ug/kg	33.9	5.08	1	A
Aroclor 1254	ND		ug/kg	33.9	3.71	1	A
Aroclor 1260	ND		ug/kg	33.9	6.26	1	A
Aroclor 1262	ND		ug/kg	33.9	4.30	1	A
Aroclor 1268	ND		ug/kg	33.9	3.51	1	A
PCBs, Total	ND		ug/kg	33.9	3.01	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	53		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	60		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-04
Client ID: B-4
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:55
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 07/15/20 12:53
Analyst: JM
Percent Solids: 98%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:50
Cleanup Method: EPA 3665A
Cleanup Date: 07/15/20
Cleanup Method: EPA 3660B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	33.1	2.94	1	A
Aroclor 1221	ND		ug/kg	33.1	3.32	1	A
Aroclor 1232	ND		ug/kg	33.1	7.03	1	A
Aroclor 1242	ND		ug/kg	33.1	4.47	1	A
Aroclor 1248	ND		ug/kg	33.1	4.97	1	A
Aroclor 1254	ND		ug/kg	33.1	3.63	1	A
Aroclor 1260	ND		ug/kg	33.1	6.12	1	A
Aroclor 1262	ND		ug/kg	33.1	4.21	1	A
Aroclor 1268	ND		ug/kg	33.1	3.43	1	A
PCBs, Total	ND		ug/kg	33.1	2.94	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		30-150	A
Decachlorobiphenyl	68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	87		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05
Client ID: B-1GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 09:45
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 07/15/20 15:49
Analyst: JAW

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:39
Cleanup Method: EPA 3665A
Cleanup Date: 07/15/20
Cleanup Method: EPA 3660B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.034	1	A
Aroclor 1221	ND		ug/l	0.083	0.067	1	A
Aroclor 1232	ND		ug/l	0.083	0.046	1	A
Aroclor 1242	ND		ug/l	0.083	0.039	1	A
Aroclor 1248	ND		ug/l	0.083	0.049	1	A
Aroclor 1254	ND		ug/l	0.083	0.039	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.035	1	A
Aroclor 1268	ND		ug/l	0.083	0.034	1	A
PCBs, Total	ND		ug/l	0.083	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86		30-150	A
Decachlorobiphenyl	71		30-150	A
2,4,5,6-Tetrachloro-m-xylene	83		30-150	B
Decachlorobiphenyl	69		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06
Client ID: B-2GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 11:15
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 07/15/20 15:57
Analyst: JAW

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:39
Cleanup Method: EPA 3665A
Cleanup Date: 07/15/20
Cleanup Method: EPA 3660B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.034	1	A
Aroclor 1221	ND		ug/l	0.083	0.067	1	A
Aroclor 1232	ND		ug/l	0.083	0.046	1	A
Aroclor 1242	ND		ug/l	0.083	0.039	1	A
Aroclor 1248	ND		ug/l	0.083	0.049	1	A
Aroclor 1254	ND		ug/l	0.083	0.039	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.035	1	A
Aroclor 1268	ND		ug/l	0.083	0.034	1	A
PCBs, Total	ND		ug/l	0.083	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	58		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07
Client ID: B-3GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:10
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 07/15/20 16:04
Analyst: JAW

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:39
Cleanup Method: EPA 3665A
Cleanup Date: 07/15/20
Cleanup Method: EPA 3660B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.034	1	A
Aroclor 1221	ND		ug/l	0.083	0.067	1	A
Aroclor 1232	ND		ug/l	0.083	0.046	1	A
Aroclor 1242	ND		ug/l	0.083	0.039	1	A
Aroclor 1248	ND		ug/l	0.083	0.049	1	A
Aroclor 1254	ND		ug/l	0.083	0.039	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.035	1	A
Aroclor 1268	ND		ug/l	0.083	0.034	1	A
PCBs, Total	ND		ug/l	0.083	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	69		30-150	A
2,4,5,6-Tetrachloro-m-xylene	78		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08
Client ID: B-4GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 13:15
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8082A
Analytical Date: 07/15/20 16:12
Analyst: JAW

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:39
Cleanup Method: EPA 3665A
Cleanup Date: 07/15/20
Cleanup Method: EPA 3660B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.083	0.034	1	A
Aroclor 1221	ND		ug/l	0.083	0.067	1	A
Aroclor 1232	ND		ug/l	0.083	0.046	1	A
Aroclor 1242	ND		ug/l	0.083	0.039	1	A
Aroclor 1248	ND		ug/l	0.083	0.049	1	A
Aroclor 1254	ND		ug/l	0.083	0.039	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.035	1	A
Aroclor 1268	ND		ug/l	0.083	0.034	1	A
PCBs, Total	ND		ug/l	0.083	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	57		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 07/15/20 12:12
Analyst: JM

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:50
Cleanup Method: EPA 3665A
Cleanup Date: 07/15/20
Cleanup Method: EPA 3660B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-04 Batch: WG1392254-1						
Aroclor 1016	ND		ug/kg	31.7	2.82	A
Aroclor 1221	ND		ug/kg	31.7	3.18	A
Aroclor 1232	ND		ug/kg	31.7	6.73	A
Aroclor 1242	ND		ug/kg	31.7	4.28	A
Aroclor 1248	ND		ug/kg	31.7	4.76	A
Aroclor 1254	ND		ug/kg	31.7	3.47	A
Aroclor 1260	ND		ug/kg	31.7	5.87	A
Aroclor 1262	ND		ug/kg	31.7	4.03	A
Aroclor 1268	ND		ug/kg	31.7	3.29	A
PCBs, Total	ND		ug/kg	31.7	2.82	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	98		30-150	A
Decachlorobiphenyl	85		30-150	A
2,4,5,6-Tetrachloro-m-xylene	114		30-150	B
Decachlorobiphenyl	98		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 07/15/20 15:27
Analyst: JAW

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 04:39
Cleanup Method: EPA 3665A
Cleanup Date: 07/15/20
Cleanup Method: EPA 3660B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 05-08 Batch: WG1392276-1						
Aroclor 1016	ND		ug/l	0.083	0.034	A
Aroclor 1221	ND		ug/l	0.083	0.067	A
Aroclor 1232	ND		ug/l	0.083	0.046	A
Aroclor 1242	ND		ug/l	0.083	0.039	A
Aroclor 1248	ND		ug/l	0.083	0.049	A
Aroclor 1254	ND		ug/l	0.083	0.039	A
Aroclor 1260	ND		ug/l	0.083	0.032	A
Aroclor 1262	ND		ug/l	0.083	0.035	A
Aroclor 1268	ND		ug/l	0.083	0.034	A
PCBs, Total	ND		ug/l	0.083	0.032	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	80		30-150	A
2,4,5,6-Tetrachloro-m-xylene	78		30-150	B
Decachlorobiphenyl	76		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1392254-2 WG1392254-3									
Aroclor 1016	99		102		40-140	3		50	A
Aroclor 1260	86		85		40-140	1		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	96		94		30-150	A
Decachlorobiphenyl	80		81		30-150	A
2,4,5,6-Tetrachloro-m-xylene	110		108		30-150	B
Decachlorobiphenyl	94		94		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 05-08 Batch: WG1392276-2 WG1392276-3									
Aroclor 1016	84		90		40-140	6		50	A
Aroclor 1260	85		87		40-140	2		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	85		93		30-150	A
Decachlorobiphenyl	83		90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		86		30-150	B
Decachlorobiphenyl	81		87		30-150	B

PESTICIDES

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-01
Client ID: B-1
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 09:30
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/15/20 11:39
Analyst: SM
Percent Solids: 96%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:51
Cleanup Method: EPA 3620B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.63	0.319	1	A
Lindane	ND		ug/kg	0.680	0.304	1	A
Alpha-BHC	ND		ug/kg	0.680	0.193	1	A
Beta-BHC	ND		ug/kg	1.63	0.618	1	A
Heptachlor	ND		ug/kg	0.816	0.366	1	A
Aldrin	ND		ug/kg	1.63	0.574	1	A
Heptachlor epoxide	ND		ug/kg	3.06	0.917	1	A
Endrin	ND		ug/kg	0.680	0.279	1	A
Endrin aldehyde	ND		ug/kg	2.04	0.714	1	A
Endrin ketone	ND		ug/kg	1.63	0.420	1	A
Dieldrin	ND		ug/kg	1.02	0.510	1	A
4,4'-DDE	ND		ug/kg	1.63	0.377	1	A
4,4'-DDD	ND		ug/kg	1.63	0.582	1	A
4,4'-DDT	ND		ug/kg	3.06	1.31	1	A
Endosulfan I	ND		ug/kg	1.63	0.385	1	A
Endosulfan II	ND		ug/kg	1.63	0.545	1	A
Endosulfan sulfate	ND		ug/kg	0.680	0.323	1	A
Methoxychlor	ND		ug/kg	3.06	0.951	1	A
Toxaphene	ND		ug/kg	30.6	8.56	1	A
cis-Chlordane	ND		ug/kg	2.04	0.568	1	A
trans-Chlordane	ND		ug/kg	2.04	0.538	1	A
Chlordane	ND		ug/kg	13.6	5.40	1	A

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-01 Date Collected: 07/14/20 09:30

Client ID: B-1 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	114		30-150	A
Decachlorobiphenyl	125		30-150	A
2,4,5,6-Tetrachloro-m-xylene	148		30-150	B
Decachlorobiphenyl	**154**	Q	30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-02
Client ID: B-2
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 11:00
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/15/20 11:48
Analyst: SM
Percent Solids: 97%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:51
Cleanup Method: EPA 3620B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.57	0.307	1	A
Lindane	ND		ug/kg	0.653	0.292	1	A
Alpha-BHC	ND		ug/kg	0.653	0.186	1	A
Beta-BHC	ND		ug/kg	1.57	0.595	1	A
Heptachlor	ND		ug/kg	0.784	0.352	1	A
Aldrin	ND		ug/kg	1.57	0.552	1	A
Heptachlor epoxide	ND		ug/kg	2.94	0.882	1	A
Endrin	ND		ug/kg	0.653	0.268	1	A
Endrin aldehyde	ND		ug/kg	1.96	0.686	1	A
Endrin ketone	ND		ug/kg	1.57	0.404	1	A
Dieldrin	ND		ug/kg	0.980	0.490	1	A
4,4'-DDE	ND		ug/kg	1.57	0.363	1	A
4,4'-DDD	ND		ug/kg	1.57	0.559	1	A
4,4'-DDT	ND		ug/kg	2.94	1.26	1	A
Endosulfan I	ND		ug/kg	1.57	0.370	1	A
Endosulfan II	ND		ug/kg	1.57	0.524	1	A
Endosulfan sulfate	ND		ug/kg	0.653	0.311	1	A
Methoxychlor	ND		ug/kg	2.94	0.915	1	A
Toxaphene	ND		ug/kg	29.4	8.23	1	A
cis-Chlordane	ND		ug/kg	1.96	0.546	1	A
trans-Chlordane	ND		ug/kg	1.96	0.518	1	A
Chlordane	ND		ug/kg	13.1	5.19	1	A

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-02 Date Collected: 07/14/20 11:00

Client ID: B-2 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		30-150	A
Decachlorobiphenyl	96		30-150	A
2,4,5,6-Tetrachloro-m-xylene	91		30-150	B
Decachlorobiphenyl	136		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-03
Client ID: B-3
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:00
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/15/20 11:57
Analyst: SM
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:51
Cleanup Method: EPA 3620B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.69	0.331	1	A
Lindane	ND		ug/kg	0.705	0.315	1	A
Alpha-BHC	ND		ug/kg	0.705	0.200	1	A
Beta-BHC	ND		ug/kg	1.69	0.642	1	A
Heptachlor	ND		ug/kg	0.846	0.379	1	A
Aldrin	ND		ug/kg	1.69	0.596	1	A
Heptachlor epoxide	ND		ug/kg	3.17	0.952	1	A
Endrin	ND		ug/kg	0.705	0.289	1	A
Endrin aldehyde	ND		ug/kg	2.12	0.740	1	A
Endrin ketone	ND		ug/kg	1.69	0.436	1	A
Dieldrin	ND		ug/kg	1.06	0.529	1	A
4,4'-DDE	ND		ug/kg	1.69	0.391	1	A
4,4'-DDD	ND		ug/kg	1.69	0.604	1	A
4,4'-DDT	ND		ug/kg	3.17	1.36	1	A
Endosulfan I	ND		ug/kg	1.69	0.400	1	A
Endosulfan II	ND		ug/kg	1.69	0.566	1	A
Endosulfan sulfate	ND		ug/kg	0.705	0.336	1	A
Methoxychlor	ND		ug/kg	3.17	0.987	1	A
Toxaphene	ND		ug/kg	31.7	8.89	1	A
cis-Chlordane	ND		ug/kg	2.12	0.590	1	A
trans-Chlordane	ND		ug/kg	2.12	0.558	1	A
Chlordane	ND		ug/kg	14.1	5.61	1	A

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-03 Date Collected: 07/14/20 12:00

Client ID: B-3 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	92		30-150	A
Decachlorobiphenyl	127		30-150	A
2,4,5,6-Tetrachloro-m-xylene	96		30-150	B
Decachlorobiphenyl	**163**	Q	30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-04
Client ID: B-4
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:55
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 07/15/20 12:06
Analyst: SM
Percent Solids: 98%

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:51
Cleanup Method: EPA 3620B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.58	0.308	1	A
Lindane	ND		ug/kg	0.656	0.293	1	A
Alpha-BHC	ND		ug/kg	0.656	0.186	1	A
Beta-BHC	ND		ug/kg	1.58	0.597	1	A
Heptachlor	ND		ug/kg	0.788	0.353	1	A
Aldrin	ND		ug/kg	1.58	0.555	1	A
Heptachlor epoxide	ND		ug/kg	2.95	0.886	1	A
Endrin	ND		ug/kg	0.656	0.269	1	A
Endrin aldehyde	ND		ug/kg	1.97	0.689	1	A
Endrin ketone	ND		ug/kg	1.58	0.406	1	A
Dieldrin	ND		ug/kg	0.985	0.492	1	A
4,4'-DDE	ND		ug/kg	1.58	0.364	1	A
4,4'-DDD	ND		ug/kg	1.58	0.562	1	A
4,4'-DDT	ND		ug/kg	2.95	1.27	1	A
Endosulfan I	ND		ug/kg	1.58	0.372	1	A
Endosulfan II	ND		ug/kg	1.58	0.526	1	A
Endosulfan sulfate	ND		ug/kg	0.656	0.312	1	A
Methoxychlor	ND		ug/kg	2.95	0.919	1	A
Toxaphene	ND		ug/kg	29.5	8.27	1	A
cis-Chlordane	ND		ug/kg	1.97	0.549	1	A
trans-Chlordane	ND		ug/kg	1.97	0.520	1	A
Chlordane	ND		ug/kg	13.1	5.22	1	A

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-04 Date Collected: 07/14/20 12:55

Client ID: B-4 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		30-150	A
Decachlorobiphenyl	119		30-150	A
2,4,5,6-Tetrachloro-m-xylene	91		30-150	B
Decachlorobiphenyl	**159**	Q	30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05
Client ID: B-1GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 09:45
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8081B
Analytical Date: 07/15/20 08:52
Analyst: SM

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 03:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05 Date Collected: 07/14/20 09:45

Client ID: B-1GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	77		30-150	A
2,4,5,6-Tetrachloro-m-xylene	94		30-150	B
Decachlorobiphenyl	123		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06
Client ID: B-2GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 11:15
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8081B
Analytical Date: 07/15/20 09:01
Analyst: SM

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 03:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06 Date Collected: 07/14/20 11:15

Client ID: B-2GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		30-150	A
Decachlorobiphenyl	76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	92		30-150	B
Decachlorobiphenyl	121		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07
Client ID: B-3GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:10
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8081B
Analytical Date: 07/15/20 09:10
Analyst: SM

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 03:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07 Date Collected: 07/14/20 12:10

Client ID: B-3GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	79		30-150	A
2,4,5,6-Tetrachloro-m-xylene	94		30-150	B
Decachlorobiphenyl	117		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08
Client ID: B-4GW
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 13:15
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8081B
Analytical Date: 07/15/20 09:19
Analyst: SM

Extraction Method: EPA 3510C
Extraction Date: 07/15/20 03:56

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08 Date Collected: 07/14/20 13:15

Client ID: B-4GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		30-150	A
Decachlorobiphenyl	84		30-150	A
2,4,5,6-Tetrachloro-m-xylene	86		30-150	B
Decachlorobiphenyl	110		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 07/15/20 08:24
Analyst: SM

Extraction Method: EPA 3510C
Extraction Date: 07/14/20 18:44

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 05-08 Batch: WG1392141-1						
Delta-BHC	ND		ug/l	0.014	0.003	A
Lindane	ND		ug/l	0.014	0.003	A
Alpha-BHC	ND		ug/l	0.014	0.003	A
Beta-BHC	ND		ug/l	0.014	0.004	A
Heptachlor	ND		ug/l	0.014	0.002	A
Aldrin	ND		ug/l	0.014	0.002	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	A
Endrin	ND		ug/l	0.029	0.003	A
Endrin aldehyde	ND		ug/l	0.029	0.006	A
Endrin ketone	ND		ug/l	0.029	0.003	A
Dieldrin	ND		ug/l	0.029	0.003	A
4,4'-DDE	ND		ug/l	0.029	0.003	A
4,4'-DDD	ND		ug/l	0.029	0.003	A
4,4'-DDT	ND		ug/l	0.029	0.003	A
Endosulfan I	ND		ug/l	0.014	0.002	A
Endosulfan II	ND		ug/l	0.029	0.004	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	A
Methoxychlor	ND		ug/l	0.143	0.005	A
Toxaphene	ND		ug/l	0.143	0.045	A
cis-Chlordane	ND		ug/l	0.014	0.005	A
trans-Chlordane	ND		ug/l	0.014	0.004	A
Chlordane	ND		ug/l	0.143	0.033	A

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 07/15/20 08:24
Analyst: SM

Extraction Method: EPA 3510C
Extraction Date: 07/14/20 18:44

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 05-08 Batch: WG1392141-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	106		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	141		30-150	B

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 07/15/20 11:11
Analyst: SM

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:51
Cleanup Method: EPA 3620B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1392256-1						
Delta-BHC	ND		ug/kg	1.55	0.303	A
Lindane	ND		ug/kg	0.645	0.288	A
Alpha-BHC	ND		ug/kg	0.645	0.183	A
Beta-BHC	ND		ug/kg	1.55	0.587	A
Heptachlor	ND		ug/kg	0.774	0.347	A
Aldrin	ND		ug/kg	1.55	0.545	A
Heptachlor epoxide	ND		ug/kg	2.90	0.871	A
Endrin	ND		ug/kg	0.645	0.264	A
Endrin aldehyde	ND		ug/kg	1.94	0.677	A
Endrin ketone	ND		ug/kg	1.55	0.399	A
Dieldrin	ND		ug/kg	0.968	0.484	A
4,4'-DDE	ND		ug/kg	1.55	0.358	A
4,4'-DDD	ND		ug/kg	1.55	0.552	A
4,4'-DDT	ND		ug/kg	2.90	1.24	A
Endosulfan I	ND		ug/kg	1.55	0.366	A
Endosulfan II	ND		ug/kg	1.55	0.517	A
Endosulfan sulfate	ND		ug/kg	0.645	0.307	A
Methoxychlor	ND		ug/kg	2.90	0.903	A
Toxaphene	ND		ug/kg	29.0	8.13	A
cis-Chlordane	ND		ug/kg	1.94	0.539	A
trans-Chlordane	ND		ug/kg	1.94	0.511	A
Chlordane	ND		ug/kg	12.9	5.13	A

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 07/15/20 11:11
Analyst: SM

Extraction Method: EPA 3546
Extraction Date: 07/15/20 03:51
Cleanup Method: EPA 3620B
Cleanup Date: 07/15/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1392256-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	93		30-150	A
Decachlorobiphenyl	132		30-150	A
2,4,5,6-Tetrachloro-m-xylene	98		30-150	B
Decachlorobiphenyl	**193**	Q	30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 05-08 Batch: WG1392141-2 WG1392141-3									
Delta-BHC	61		57		30-150	8		20	A
Lindane	90		83		30-150	8		20	A
Alpha-BHC	94		87		30-150	8		20	A
Beta-BHC	96		85		30-150	13		20	A
Heptachlor	99		87		30-150	12		20	A
Aldrin	97		87		30-150	11		20	A
Heptachlor epoxide	99		89		30-150	10		20	A
Endrin	104		94		30-150	10		20	A
Endrin aldehyde	95		85		30-150	12		20	A
Endrin ketone	113		102		30-150	10		20	A
Dieldrin	108		99		30-150	9		20	A
4,4'-DDE	103		93		30-150	10		20	A
4,4'-DDD	112		101		30-150	10		20	A
4,4'-DDT	116		103		30-150	12		20	A
Endosulfan I	102		91		30-150	11		20	A
Endosulfan II	104		95		30-150	9		20	A
Endosulfan sulfate	101		92		30-150	10		20	A
Methoxychlor	114		100		30-150	13		20	A
cis-Chlordane	97		87		30-150	11		20	A
trans-Chlordane	96		86		30-150	11		20	A

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1
Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 05-08 Batch: WG1392141-2 WG1392141-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	88		83		30-150	A
Decachlorobiphenyl	118		100		30-150	A
2,4,5,6-Tetrachloro-m-xylene	82		80		30-150	B
Decachlorobiphenyl	150		136		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1392256-2 WG1392256-3									
Delta-BHC	94		94		30-150	0		30	A
Lindane	89		89		30-150	0		30	A
Alpha-BHC	93		92		30-150	1		30	A
Beta-BHC	92		91		30-150	1		30	A
Heptachlor	94		93		30-150	1		30	A
Aldrin	94		94		30-150	0		30	A
Heptachlor epoxide	96		94		30-150	2		30	A
Endrin	102		101		30-150	1		30	A
Endrin aldehyde	92		84		30-150	9		30	A
Endrin ketone	104		102		30-150	2		30	A
Dieldrin	106		106		30-150	0		30	A
4,4'-DDE	101		100		30-150	1		30	A
4,4'-DDD	110		109		30-150	1		30	A
4,4'-DDT	114		109		30-150	4		30	A
Endosulfan I	98		97		30-150	1		30	A
Endosulfan II	101		102		30-150	1		30	A
Endosulfan sulfate	92		89		30-150	3		30	A
Methoxychlor	110		105		30-150	5		30	A
cis-Chlordane	93		93		30-150	0		30	A
trans-Chlordane	93		94		30-150	1		30	A

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1392256-2 WG1392256-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90		88		30-150	A
Decachlorobiphenyl	133		118		30-150	A
2,4,5,6-Tetrachloro-m-xylene	92		91		30-150	B
Decachlorobiphenyl	**184**	Q	**166**	Q	30-150	B

METALS

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-01 Date Collected: 07/14/20 09:30

Client ID: B-1 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 96%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	925		mg/kg	8.09	2.18	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Antimony, Total	ND		mg/kg	4.04	0.307	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Arsenic, Total	1.16		mg/kg	0.809	0.168	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Barium, Total	4.07		mg/kg	0.809	0.141	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Beryllium, Total	0.040	J	mg/kg	0.404	0.027	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Cadmium, Total	ND		mg/kg	0.809	0.079	2	07/15/20 06:50	07/15/20 11:58	EPA 3050B	1,6010D	PE
Calcium, Total	387		mg/kg	8.09	2.83	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Chromium, Total	25.9		mg/kg	0.809	0.078	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Cobalt, Total	0.752	J	mg/kg	1.62	0.134	2	07/15/20 06:50	07/15/20 11:58	EPA 3050B	1,6010D	PE
Copper, Total	3.32		mg/kg	0.809	0.209	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Iron, Total	3590		mg/kg	4.04	0.731	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Lead, Total	3.80	J	mg/kg	4.04	0.217	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Magnesium, Total	162		mg/kg	8.09	1.25	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Manganese, Total	23.6		mg/kg	0.809	0.129	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Mercury, Total	ND		mg/kg	0.066	0.043	1	07/15/20 09:25	07/15/20 10:41	EPA 7471B	1,7471B	EW
Nickel, Total	3.16		mg/kg	2.02	0.196	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Potassium, Total	106	J	mg/kg	202	11.6	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Selenium, Total	ND		mg/kg	1.62	0.209	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Silver, Total	ND		mg/kg	0.809	0.229	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Sodium, Total	16.0	J	mg/kg	162	2.55	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Thallium, Total	ND		mg/kg	1.62	0.255	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Vanadium, Total	4.04		mg/kg	0.809	0.164	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE
Zinc, Total	4.39		mg/kg	4.04	0.237	2	07/15/20 06:50	07/15/20 10:24	EPA 3050B	1,6010D	PE

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-02 Date Collected: 07/14/20 11:00

Client ID: B-2 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	4530		mg/kg	8.08	2.18	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Antimony, Total	0.598	J	mg/kg	4.04	0.307	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Arsenic, Total	3.59		mg/kg	0.808	0.168	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Barium, Total	34.9		mg/kg	0.808	0.141	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Beryllium, Total	0.105	J	mg/kg	0.404	0.027	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Cadmium, Total	ND		mg/kg	0.808	0.079	2	07/15/20 06:50	07/15/20 12:02	EPA 3050B	1,6010D	PE
Calcium, Total	787		mg/kg	8.08	2.83	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Chromium, Total	10.3		mg/kg	0.808	0.078	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Cobalt, Total	1.46	J	mg/kg	1.62	0.134	2	07/15/20 06:50	07/15/20 12:02	EPA 3050B	1,6010D	PE
Copper, Total	7.09		mg/kg	0.808	0.208	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Iron, Total	10800		mg/kg	4.04	0.730	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Lead, Total	168		mg/kg	4.04	0.217	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Magnesium, Total	299		mg/kg	8.08	1.24	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Manganese, Total	48.4		mg/kg	0.808	0.128	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Mercury, Total	0.284		mg/kg	0.065	0.042	1	07/15/20 09:25	07/15/20 10:55	EPA 7471B	1,7471B	EW
Nickel, Total	3.40		mg/kg	2.02	0.196	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Potassium, Total	178	J	mg/kg	202	11.6	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Selenium, Total	ND		mg/kg	1.62	0.208	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Silver, Total	ND		mg/kg	0.808	0.229	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Sodium, Total	47.4	J	mg/kg	162	2.55	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Thallium, Total	ND		mg/kg	1.62	0.255	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Vanadium, Total	14.6		mg/kg	0.808	0.164	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE
Zinc, Total	89.0		mg/kg	4.04	0.237	2	07/15/20 06:50	07/15/20 10:29	EPA 3050B	1,6010D	PE

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-03 Date Collected: 07/14/20 12:00

Client ID: B-3 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	2730		mg/kg	8.36	2.26	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Antimony, Total	ND		mg/kg	4.18	0.318	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Arsenic, Total	1.31		mg/kg	0.836	0.174	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Barium, Total	7.27		mg/kg	0.836	0.146	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Beryllium, Total	0.050	J	mg/kg	0.418	0.028	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Cadmium, Total	ND		mg/kg	0.836	0.082	2	07/15/20 06:50	07/15/20 12:06	EPA 3050B	1,6010D	PE
Calcium, Total	289		mg/kg	8.36	2.93	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Chromium, Total	4.19		mg/kg	0.836	0.080	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Cobalt, Total	0.895	J	mg/kg	1.67	0.139	2	07/15/20 06:50	07/15/20 12:06	EPA 3050B	1,6010D	PE
Copper, Total	2.46		mg/kg	0.836	0.216	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Iron, Total	4790		mg/kg	4.18	0.755	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Lead, Total	11.7		mg/kg	4.18	0.224	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Magnesium, Total	148		mg/kg	8.36	1.29	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Manganese, Total	30.3		mg/kg	0.836	0.133	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Mercury, Total	ND		mg/kg	0.067	0.044	1	07/15/20 09:25	07/15/20 11:05	EPA 7471B	1,7471B	EW
Nickel, Total	1.80	J	mg/kg	2.09	0.202	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Potassium, Total	96.4	J	mg/kg	209	12.0	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Selenium, Total	ND		mg/kg	1.67	0.216	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Silver, Total	ND		mg/kg	0.836	0.237	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Sodium, Total	16.1	J	mg/kg	167	2.64	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Thallium, Total	ND		mg/kg	1.67	0.264	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Vanadium, Total	6.35		mg/kg	0.836	0.170	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE
Zinc, Total	6.38		mg/kg	4.18	0.245	2	07/15/20 06:50	07/15/20 10:33	EPA 3050B	1,6010D	PE

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-04 Date Collected: 07/14/20 12:55

Client ID: B-4 Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 98%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	648		mg/kg	7.91	2.14	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Antimony, Total	ND		mg/kg	3.95	0.300	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Arsenic, Total	1.19		mg/kg	0.791	0.164	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Barium, Total	2.44		mg/kg	0.791	0.138	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Beryllium, Total	0.032	J	mg/kg	0.395	0.026	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Cadmium, Total	ND		mg/kg	0.791	0.078	2	07/15/20 06:50	07/15/20 12:11	EPA 3050B	1,6010D	PE
Calcium, Total	28.1		mg/kg	7.91	2.77	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Chromium, Total	6.45		mg/kg	0.791	0.076	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Cobalt, Total	0.467	J	mg/kg	1.58	0.131	2	07/15/20 06:50	07/15/20 12:11	EPA 3050B	1,6010D	PE
Copper, Total	1.38		mg/kg	0.791	0.204	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Iron, Total	1730		mg/kg	3.95	0.714	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Lead, Total	0.506	J	mg/kg	3.95	0.212	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Magnesium, Total	43.1		mg/kg	7.91	1.22	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Manganese, Total	12.0		mg/kg	0.791	0.126	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Mercury, Total	ND		mg/kg	0.064	0.042	1	07/15/20 09:25	07/15/20 11:08	EPA 7471B	1,7471B	EW
Nickel, Total	0.941	J	mg/kg	1.98	0.191	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Potassium, Total	49.9	J	mg/kg	198	11.4	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Selenium, Total	ND		mg/kg	1.58	0.204	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Silver, Total	ND		mg/kg	0.791	0.224	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Sodium, Total	12.6	J	mg/kg	158	2.49	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Thallium, Total	ND		mg/kg	1.58	0.249	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Vanadium, Total	2.49		mg/kg	0.791	0.160	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE
Zinc, Total	1.17	J	mg/kg	3.95	0.232	2	07/15/20 06:50	07/15/20 10:37	EPA 3050B	1,6010D	PE

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05 Date Collected: 07/14/20 09:45

Client ID: B-1GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	24.4		mg/l	0.0100	0.00327	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Antimony, Total	0.00087	J	mg/l	0.00400	0.00042	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Arsenic, Total	0.02221		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Barium, Total	0.6390		mg/l	0.00050	0.00017	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Beryllium, Total	0.00524		mg/l	0.00050	0.00010	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Cadmium, Total	0.00074		mg/l	0.00020	0.00005	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Calcium, Total	14.3		mg/l	0.100	0.0394	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Chromium, Total	1.605		mg/l	0.00100	0.00017	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Cobalt, Total	0.03973		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Copper, Total	0.07420		mg/l	0.00100	0.00038	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Iron, Total	150.		mg/l	0.0500	0.0191	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Lead, Total	0.6725		mg/l	0.00100	0.00034	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Magnesium, Total	2.92		mg/l	0.0700	0.0242	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Manganese, Total	0.8649		mg/l	0.00100	0.00044	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Mercury, Total	0.00124		mg/l	0.00020	0.00009	1	07/15/20 08:38	07/15/20 16:48	EPA 7470A	1,7470A	EW
Nickel, Total	0.1867		mg/l	0.00200	0.00055	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Potassium, Total	4.40		mg/l	0.100	0.0309	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Selenium, Total	0.0162		mg/l	0.00500	0.00173	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Sodium, Total	15.0		mg/l	0.100	0.0293	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Thallium, Total	0.00038	J	mg/l	0.00050	0.00014	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Vanadium, Total	0.1682		mg/l	0.00500	0.00157	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Zinc, Total	0.1659		mg/l	0.01000	0.00341	1	07/15/20 07:33	07/15/20 12:09	EPA 3005A	1,6020B	AM
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	0.0230		mg/l	0.0100	0.00327	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Antimony, Dissolved	0.00068	J	mg/l	0.00400	0.00042	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	0.00127		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Barium, Dissolved	0.04375		mg/l	0.00050	0.00017	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-05 Date Collected: 07/14/20 09:45

Client ID: B-1GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Calcium, Dissolved	9.03		mg/l	0.100	0.0394	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	0.00491		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Copper, Dissolved	ND		mg/l	0.00100	0.00038	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Iron, Dissolved	13.0		mg/l	0.0500	0.0191	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Lead, Dissolved	0.00508		mg/l	0.00100	0.00034	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	1.16		mg/l	0.0700	0.0242	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.2890		mg/l	0.00100	0.00044	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00020	0.00009	1	07/15/20 08:38	07/15/20 17:05	EPA 7470A	1,7470A	EW
Nickel, Dissolved	0.01373		mg/l	0.00200	0.00055	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Potassium, Dissolved	2.28		mg/l	0.100	0.0309	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Sodium, Dissolved	14.0		mg/l	0.100	0.0293	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM
Zinc, Dissolved	0.00766	J	mg/l	0.01000	0.00341	1	07/15/20 07:33	07/15/20 11:14	EPA 3005A	1,6020B	AM

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06 Date Collected: 07/14/20 11:15

Client ID: B-2GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	73.8		mg/l	0.0100	0.00327	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Antimony, Total	0.00071	J	mg/l	0.00400	0.00042	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Arsenic, Total	0.02771		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Barium, Total	0.3974		mg/l	0.00050	0.00017	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Beryllium, Total	0.01230		mg/l	0.00050	0.00010	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Cadmium, Total	0.00288		mg/l	0.00020	0.00005	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Calcium, Total	44.4		mg/l	0.100	0.0394	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Chromium, Total	0.8659		mg/l	0.00100	0.00017	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Cobalt, Total	0.2501		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Copper, Total	0.1972		mg/l	0.00100	0.00038	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Iron, Total	227.		mg/l	0.0500	0.0191	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Lead, Total	0.4621		mg/l	0.00100	0.00034	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Magnesium, Total	6.26		mg/l	0.0700	0.0242	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Manganese, Total	3.548		mg/l	0.00100	0.00044	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Mercury, Total	0.00236		mg/l	0.00020	0.00009	1	07/15/20 08:38	07/15/20 16:43	EPA 7470A	1,7470A	EW
Nickel, Total	0.6246		mg/l	0.00200	0.00055	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Potassium, Total	5.00		mg/l	0.100	0.0309	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Selenium, Total	0.0275		mg/l	0.00500	0.00173	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Silver, Total	0.00021	J	mg/l	0.00040	0.00016	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Sodium, Total	4.52		mg/l	0.100	0.0293	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Thallium, Total	0.00089		mg/l	0.00050	0.00014	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Vanadium, Total	0.2063		mg/l	0.00500	0.00157	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Zinc, Total	1.088		mg/l	0.01000	0.00341	1	07/15/20 07:33	07/15/20 12:14	EPA 3005A	1,6020B	AM
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	0.00349	J	mg/l	0.0100	0.00327	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Antimony, Dissolved	ND		mg/l	0.00400	0.00042	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	0.00068		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Barium, Dissolved	0.00582		mg/l	0.00050	0.00017	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-06 Date Collected: 07/14/20 11:15

Client ID: B-2GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Calcium, Dissolved	28.3		mg/l	0.100	0.0394	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	0.00506		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Copper, Dissolved	ND		mg/l	0.00100	0.00038	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Iron, Dissolved	1.53		mg/l	0.0500	0.0191	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	2.39		mg/l	0.0700	0.0242	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.6186		mg/l	0.00100	0.00044	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00020	0.00009	1	07/15/20 08:38	07/15/20 17:07	EPA 7470A	1,7470A	EW
Nickel, Dissolved	0.00437		mg/l	0.00200	0.00055	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Potassium, Dissolved	2.30		mg/l	0.100	0.0309	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Sodium, Dissolved	3.60		mg/l	0.100	0.0293	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM
Zinc, Dissolved	0.00388	J	mg/l	0.01000	0.00341	1	07/15/20 07:33	07/15/20 11:19	EPA 3005A	1,6020B	AM

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07 Date Collected: 07/14/20 12:10

Client ID: B-3GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	32.8		mg/l	0.0100	0.00327	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Antimony, Total	0.00060	J	mg/l	0.00400	0.00042	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Arsenic, Total	0.01894		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Barium, Total	0.3175		mg/l	0.00050	0.00017	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Beryllium, Total	0.00637		mg/l	0.00050	0.00010	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Cadmium, Total	0.00058		mg/l	0.00020	0.00005	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Calcium, Total	73.0		mg/l	0.100	0.0394	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Chromium, Total	0.4933		mg/l	0.00100	0.00017	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Cobalt, Total	0.08147		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Copper, Total	0.1432		mg/l	0.00100	0.00038	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Iron, Total	128.		mg/l	0.0500	0.0191	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Lead, Total	0.5886		mg/l	0.00100	0.00034	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Magnesium, Total	7.96		mg/l	0.0700	0.0242	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Manganese, Total	1.619		mg/l	0.00100	0.00044	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Mercury, Total	0.00052		mg/l	0.00020	0.00009	1	07/15/20 08:38	07/15/20 16:50	EPA 7470A	1,7470A	EW
Nickel, Total	0.1055		mg/l	0.00200	0.00055	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Potassium, Total	7.92		mg/l	0.100	0.0309	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Selenium, Total	0.0206		mg/l	0.00500	0.00173	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Sodium, Total	77.7		mg/l	0.100	0.0293	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Thallium, Total	0.00049	J	mg/l	0.00050	0.00014	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Vanadium, Total	0.09184		mg/l	0.00500	0.00157	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Zinc, Total	0.1136		mg/l	0.01000	0.00341	1	07/15/20 07:33	07/15/20 12:18	EPA 3005A	1,6020B	AM
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	ND		mg/l	0.0100	0.00327	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Antimony, Dissolved	0.00089	J	mg/l	0.00400	0.00042	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	0.00025	J	mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Barium, Dissolved	0.02419		mg/l	0.00050	0.00017	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-07 Date Collected: 07/14/20 12:10

Client ID: B-3GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Calcium, Dissolved	65.8		mg/l	0.100	0.0394	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	0.03294		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Copper, Dissolved	0.00052	J	mg/l	0.00100	0.00038	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Iron, Dissolved	5.37		mg/l	0.0500	0.0191	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	6.20		mg/l	0.0700	0.0242	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.8764		mg/l	0.00100	0.00044	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00020	0.00009	1	07/15/20 08:38	07/15/20 17:00	EPA 7470A	1,7470A	EW
Nickel, Dissolved	0.01709		mg/l	0.00200	0.00055	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Potassium, Dissolved	6.04		mg/l	0.100	0.0309	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Sodium, Dissolved	77.6		mg/l	0.100	0.0293	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM
Zinc, Dissolved	0.00453	J	mg/l	0.01000	0.00341	1	07/15/20 07:33	07/15/20 11:09	EPA 3005A	1,6020B	AM

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08 Date Collected: 07/14/20 13:15

Client ID: B-4GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	35.8		mg/l	0.0100	0.00327	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Antimony, Total	0.00043	J	mg/l	0.00400	0.00042	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Arsenic, Total	0.01820		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Barium, Total	0.4164		mg/l	0.00050	0.00017	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Beryllium, Total	0.00560		mg/l	0.00050	0.00010	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Cadmium, Total	0.00066		mg/l	0.00020	0.00005	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Calcium, Total	78.2		mg/l	0.100	0.0394	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Chromium, Total	0.5282		mg/l	0.00100	0.00017	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Cobalt, Total	0.1066		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Copper, Total	0.1583		mg/l	0.00100	0.00038	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Iron, Total	131.		mg/l	0.0500	0.0191	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Lead, Total	0.4631		mg/l	0.00100	0.00034	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Magnesium, Total	6.59		mg/l	0.0700	0.0242	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Manganese, Total	1.739		mg/l	0.00100	0.00044	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Mercury, Total	0.00066		mg/l	0.00020	0.00009	1	07/15/20 08:38	07/15/20 16:51	EPA 7470A	1,7470A	EW
Nickel, Total	0.09470		mg/l	0.00200	0.00055	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Potassium, Total	13.3		mg/l	0.100	0.0309	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Selenium, Total	0.0226		mg/l	0.00500	0.00173	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Sodium, Total	207.		mg/l	0.100	0.0293	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Thallium, Total	0.00053		mg/l	0.00050	0.00014	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Vanadium, Total	0.09114		mg/l	0.00500	0.00157	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Zinc, Total	0.2103		mg/l	0.01000	0.00341	1	07/15/20 07:33	07/15/20 12:23	EPA 3005A	1,6020B	AM
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	0.260		mg/l	0.0100	0.00327	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Antimony, Dissolved	ND		mg/l	0.00400	0.00042	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	0.00052		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Barium, Dissolved	0.03031		mg/l	0.00050	0.00017	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-08 Date Collected: 07/14/20 13:15

Client ID: B-4GW Date Received: 07/14/20

Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Calcium, Dissolved	68.9		mg/l	0.100	0.0394	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Chromium, Dissolved	0.00073	J	mg/l	0.00100	0.00017	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	0.03054		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Copper, Dissolved	0.00056	J	mg/l	0.00100	0.00038	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Iron, Dissolved	3.00		mg/l	0.0500	0.0191	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Lead, Dissolved	0.00073	J	mg/l	0.00100	0.00034	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	4.40		mg/l	0.0700	0.0242	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.7328		mg/l	0.00100	0.00044	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00020	0.00009	1	07/15/20 08:38	07/15/20 17:08	EPA 7470A	1,7470A	EW
Nickel, Dissolved	0.01170		mg/l	0.00200	0.00055	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Potassium, Dissolved	11.1		mg/l	0.100	0.0309	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Selenium, Dissolved	0.00303	J	mg/l	0.00500	0.00173	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Sodium, Dissolved	215.		mg/l	0.100	0.0293	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM
Zinc, Dissolved	0.00428	J	mg/l	0.01000	0.00341	1	07/15/20 07:33	07/15/20 11:23	EPA 3005A	1,6020B	AM

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1391842-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	07/15/20 09:25	07/15/20 10:35	1,7471B	EW

Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1392294-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Antimony, Total	0.244	J	mg/kg	2.00	0.152	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Arsenic, Total	ND		mg/kg	0.400	0.083	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Barium, Total	ND		mg/kg	0.400	0.070	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Beryllium, Total	ND		mg/kg	0.200	0.013	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Cadmium, Total	ND		mg/kg	0.400	0.039	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Calcium, Total	ND		mg/kg	4.00	1.40	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Chromium, Total	0.060	J	mg/kg	0.400	0.038	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Cobalt, Total	ND		mg/kg	0.800	0.066	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Copper, Total	ND		mg/kg	0.400	0.103	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Iron, Total	1.02	J	mg/kg	2.00	0.361	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Lead, Total	ND		mg/kg	2.00	0.107	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Magnesium, Total	ND		mg/kg	4.00	0.616	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Manganese, Total	ND		mg/kg	0.400	0.064	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Nickel, Total	ND		mg/kg	1.00	0.097	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Potassium, Total	ND		mg/kg	100	5.76	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Selenium, Total	ND		mg/kg	0.800	0.103	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Silver, Total	ND		mg/kg	0.400	0.113	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Sodium, Total	ND		mg/kg	80.0	1.26	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Thallium, Total	ND		mg/kg	0.800	0.126	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Vanadium, Total	ND		mg/kg	0.400	0.081	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE
Zinc, Total	ND		mg/kg	2.00	0.117	1	07/15/20 06:50	07/15/20 09:24	1,6010D	PE

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 05-08 Batch: WG1392311-1										
Aluminum, Dissolved	ND		mg/l	0.0100	0.00327	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Antimony, Dissolved	ND		mg/l	0.00400	0.00042	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Barium, Dissolved	ND		mg/l	0.00050	0.00017	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Calcium, Dissolved	ND		mg/l	0.100	0.0394	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Cobalt, Dissolved	ND		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Copper, Dissolved	0.00051	J	mg/l	0.00100	0.00038	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Iron, Dissolved	ND		mg/l	0.0500	0.0191	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Magnesium, Dissolved	ND		mg/l	0.0700	0.0242	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Manganese, Dissolved	ND		mg/l	0.00100	0.00044	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Nickel, Dissolved	ND		mg/l	0.00200	0.00055	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Potassium, Dissolved	ND		mg/l	0.100	0.0309	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Sodium, Dissolved	ND		mg/l	0.100	0.0293	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM
Zinc, Dissolved	ND		mg/l	0.01000	0.00341	1	07/15/20 07:33	07/15/20 10:44	1,6020B	AM

Prep Information

Digestion Method: EPA 3005A

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 05-08 Batch: WG1392313-1										
Aluminum, Total	ND		mg/l	0.0100	0.00327	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Arsenic, Total	ND		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Barium, Total	ND		mg/l	0.00050	0.00017	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Calcium, Total	ND		mg/l	0.100	0.0394	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Copper, Total	ND		mg/l	0.00100	0.00038	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Iron, Total	ND		mg/l	0.0500	0.0191	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Manganese, Total	ND		mg/l	0.00100	0.00044	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Potassium, Total	ND		mg/l	0.100	0.0309	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Sodium, Total	ND		mg/l	0.100	0.0293	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM
Zinc, Total	ND		mg/l	0.01000	0.00341	1	07/15/20 07:33	07/15/20 11:44	1,6020B	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 05-08 Batch: WG1392316-1										
Mercury, Dissolved	ND		mg/l	0.00020	0.00009	1	07/15/20 08:38	07/15/20 16:53	1,7470A	EW

Project Name: 20-286219.1 **Lab Number:** L2029724

Project Number: 20-286219.1 **Report Date:** 07/15/20

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 05-08 Batch: WG1392318-1										
Mercury, Total	ND		mg/l	0.00020	0.00009	1	07/15/20 08:38	07/15/20 16:39	1,7470A	EW

Prep Information

Digestion Method: EPA 7470A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1391842-2 SRM Lot Number: D109-540								
Mercury, Total	109		-		60-140	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1392294-2 SRM Lot Number: D109-540					
Aluminum, Total	72	-	50-150	-	
Antimony, Total	157	-	19-250	-	
Arsenic, Total	94	-	70-130	-	
Barium, Total	95	-	75-125	-	
Beryllium, Total	89	-	75-125	-	
Cadmium, Total	88	-	75-125	-	
Calcium, Total	98	-	73-128	-	
Chromium, Total	92	-	70-130	-	
Cobalt, Total	89	-	75-125	-	
Copper, Total	97	-	75-125	-	
Iron, Total	92	-	35-165	-	
Lead, Total	92	-	72-128	-	
Magnesium, Total	81	-	62-138	-	
Manganese, Total	92	-	74-126	-	
Nickel, Total	90	-	70-130	-	
Potassium, Total	81	-	59-141	-	
Selenium, Total	95	-	68-132	-	
Silver, Total	93	-	68-131	-	
Sodium, Total	95	-	35-165	-	
Thallium, Total	97	-	68-131	-	
Vanadium, Total	97	-	59-141	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1392294-2 SRM Lot Number: D109-540					
Zinc, Total	86	-	70-130	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 05-08 Batch: WG1392311-2					
Aluminum, Dissolved	98	-	80-120	-	
Antimony, Dissolved	89	-	80-120	-	
Arsenic, Dissolved	98	-	80-120	-	
Barium, Dissolved	102	-	80-120	-	
Beryllium, Dissolved	112	-	80-120	-	
Cadmium, Dissolved	104	-	80-120	-	
Calcium, Dissolved	106	-	80-120	-	
Chromium, Dissolved	99	-	80-120	-	
Cobalt, Dissolved	100	-	80-120	-	
Copper, Dissolved	100	-	80-120	-	
Iron, Dissolved	101	-	80-120	-	
Lead, Dissolved	106	-	80-120	-	
Magnesium, Dissolved	105	-	80-120	-	
Manganese, Dissolved	98	-	80-120	-	
Nickel, Dissolved	95	-	80-120	-	
Potassium, Dissolved	105	-	80-120	-	
Selenium, Dissolved	104	-	80-120	-	
Silver, Dissolved	103	-	80-120	-	
Sodium, Dissolved	102	-	80-120	-	
Thallium, Dissolved	102	-	80-120	-	
Vanadium, Dissolved	98	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 05-08 Batch: WG1392311-2					
Zinc, Dissolved	105	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 05-08 Batch: WG1392313-2					
Aluminum, Total	98	-	80-120	-	
Antimony, Total	91	-	80-120	-	
Arsenic, Total	98	-	80-120	-	
Barium, Total	100	-	80-120	-	
Beryllium, Total	113	-	80-120	-	
Cadmium, Total	101	-	80-120	-	
Calcium, Total	100	-	80-120	-	
Chromium, Total	98	-	80-120	-	
Cobalt, Total	98	-	80-120	-	
Copper, Total	100	-	80-120	-	
Iron, Total	97	-	80-120	-	
Lead, Total	106	-	80-120	-	
Magnesium, Total	102	-	80-120	-	
Manganese, Total	96	-	80-120	-	
Nickel, Total	92	-	80-120	-	
Potassium, Total	101	-	80-120	-	
Selenium, Total	99	-	80-120	-	
Silver, Total	102	-	80-120	-	
Sodium, Total	100	-	80-120	-	
Thallium, Total	101	-	80-120	-	
Vanadium, Total	98	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 05-08 Batch: WG1392313-2					
Zinc, Total	103	-	80-120	-	
Dissolved Metals - Mansfield Lab Associated sample(s): 05-08 Batch: WG1392316-2					
Mercury, Dissolved	92	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 05-08 Batch: WG1392318-2					
Mercury, Total	92	-	80-120	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1391842-3 QC Sample: L2029724-01 Client ID: B-1												
Mercury, Total	ND	0.131	0.137	104		-	-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1392294-3 QC Sample: L2029683-01 Client ID: MS Sample										
Aluminum, Total	4090	178	4940	**476**	Q	-	-	75-125	-	20
Antimony, Total	0.618J	44.6	30.2	**68**	Q	-	-	75-125	-	20
Arsenic, Total	5.08	10.7	12.2	**66**	Q	-	-	75-125	-	20
Barium, Total	14.4	178	147	**74**	Q	-	-	75-125	-	20
Beryllium, Total	0.436	4.46	3.42	**67**	Q	-	-	75-125	-	20
Cadmium, Total	ND	4.55	3.05	**67**	Q	-	-	75-125	-	20
Calcium, Total	294	893	995	78		-	-	75-125	-	20
Chromium, Total	11.1	17.8	26.5	86		-	-	75-125	-	20
Cobalt, Total	6.10	44.6	33.5	**61**	Q	-	-	75-125	-	20
Copper, Total	4.12	22.3	20.9	75		-	-	75-125	-	20
Iron, Total	11800	89.3	11800	**0**	Q	-	-	75-125	-	20
Lead, Total	3.38	45.5	36.1	**72**	Q	-	-	75-125	-	20
Magnesium, Total	846	893	1600	84		-	-	75-125	-	20
Manganese, Total	107	44.6	102	**0**	Q	-	-	75-125	-	20
Nickel, Total	6.97	44.6	34.7	**62**	Q	-	-	75-125	-	20
Potassium, Total	794	893	1600	90		-	-	75-125	-	20
Selenium, Total	ND	10.7	7.05	**66**	Q	-	-	75-125	-	20
Silver, Total	ND	26.8	18.3	**68**	Q	-	-	75-125	-	20
Sodium, Total	17.4J	893	656	**73**	Q	-	-	75-125	-	20
Thallium, Total	ND	10.7	7.55	**70**	Q	-	-	75-125	-	20
Vanadium, Total	16.7	44.6	50.2	75		-	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1392294-3 QC Sample: L2029683-01 Client ID: MS Sample										
Zinc, Total	28.8	44.6	56.4	**62**	Q	-	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392311-3 QC Sample: L2029724-07 Client ID: B-3GW										
Aluminum, Dissolved	ND	2	1.92	96		-	-	75-125	-	20
Antimony, Dissolved	0.00089J	0.5	0.5900	118		-	-	75-125	-	20
Arsenic, Dissolved	0.00025J	0.12	0.1239	103		-	-	75-125	-	20
Barium, Dissolved	0.02419	2	2.013	99		-	-	75-125	-	20
Beryllium, Dissolved	ND	0.05	0.05856	117		-	-	75-125	-	20
Cadmium, Dissolved	ND	0.051	0.05221	102		-	-	75-125	-	20
Calcium, Dissolved	65.8	10	70.9	**51**	Q	-	-	75-125	-	20
Chromium, Dissolved	ND	0.2	0.1883	94		-	-	75-125	-	20
Cobalt, Dissolved	0.03294	0.5	0.5110	96		-	-	75-125	-	20
Copper, Dissolved	0.00052J	0.25	0.2398	96		-	-	75-125	-	20
Iron, Dissolved	5.37	1	6.01	**64**	Q	-	-	75-125	-	20
Lead, Dissolved	ND	0.51	0.5276	103		-	-	75-125	-	20
Magnesium, Dissolved	6.20	10	16.1	99		-	-	75-125	-	20
Manganese, Dissolved	0.8764	0.5	1.312	87		-	-	75-125	-	20
Nickel, Dissolved	0.01709	0.5	0.4634	89		-	-	75-125	-	20
Potassium, Dissolved	6.04	10	15.7	97		-	-	75-125	-	20
Selenium, Dissolved	ND	0.12	0.116	97		-	-	75-125	-	20
Silver, Dissolved	ND	0.05	0.05063	101		-	-	75-125	-	20
Sodium, Dissolved	77.6	10	66.0	**0**	Q	-	-	75-125	-	20
Thallium, Dissolved	ND	0.12	0.1204	100		-	-	75-125	-	20
Vanadium, Dissolved	ND	0.5	0.4837	97		-	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392311-3 QC Sample: L2029724-07 Client ID: B-3GW									
Zinc, Dissolved	0.00453J	0.5	0.5072	101	-	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392313-3 QC Sample: L2029724-05 Client ID: B-1GW										
Aluminum, Total	24.4	2	29.7	**265**	Q	-	-	75-125	-	20
Antimony, Total	0.00087J	0.5	0.3964	79		-	-	75-125	-	20
Arsenic, Total	0.02221	0.12	0.1399	98		-	-	75-125	-	20
Barium, Total	0.6390	2	2.806	108		-	-	75-125	-	20
Beryllium, Total	0.00524	0.05	0.06850	**126**	Q	-	-	75-125	-	20
Cadmium, Total	0.00074	0.051	0.05694	110		-	-	75-125	-	20
Calcium, Total	14.3	10	25.1	108		-	-	75-125	-	20
Chromium, Total	1.605	0.2	1.763	79		-	-	75-125	-	20
Cobalt, Total	0.03973	0.5	0.5618	104		-	-	75-125	-	20
Copper, Total	0.07420	0.25	0.3400	106		-	-	75-125	-	20
Iron, Total	150.	1	116	**0**	Q	-	-	75-125	-	20
Lead, Total	0.6725	0.51	1.051	**74**	Q	-	-	75-125	-	20
Magnesium, Total	2.92	10	13.6	107		-	-	75-125	-	20
Manganese, Total	0.8649	0.5	1.426	112		-	-	75-125	-	20
Nickel, Total	0.1867	0.5	0.6960	102		-	-	75-125	-	20
Potassium, Total	4.40	10	14.8	104		-	-	75-125	-	20
Selenium, Total	0.0162	0.12	0.110	78		-	-	75-125	-	20
Silver, Total	ND	0.05	0.05305	106		-	-	75-125	-	20
Sodium, Total	15.0	10	22.2	**72**	Q	-	-	75-125	-	20
Thallium, Total	0.00038J	0.12	0.1259	105		-	-	75-125	-	20
Vanadium, Total	0.1682	0.5	0.6849	103		-	-	75-125	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392313-3 QC Sample: L2029724-05 Client ID: B-1GW									
Zinc, Total	0.1659	0.5	0.7139	110	-	-	75-125	-	20
Dissolved Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392316-3 QC Sample: L2029724-07 Client ID: B-3GW									
Mercury, Dissolved	ND	0.005	0.00550	110	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392318-3 QC Sample: L2029724-06 Client ID: B-2GW									
Mercury, Total	0.00236	0.005	0.00732	99	-	-	75-125	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1391842-4 QC Sample: L2029724-01 Client ID: B-1						
Mercury, Total	ND	ND	mg/kg	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1392294-4 QC Sample: L2029683-01 Client ID: DUP Sample						
Arsenic, Total	5.08	5.17	mg/kg	2		20
Chromium, Total	11.1	14.2	mg/kg	**25**	Q	20
Copper, Total	4.12	4.68	mg/kg	13		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392311-4 QC Sample: L2029724-07 Client ID: B-3GW					
Aluminum, Dissolved	ND	0.00428J	mg/l	NC	20
Antimony, Dissolved	0.00089J	0.00213J	mg/l	NC	20
Arsenic, Dissolved	0.00025J	0.00027J	mg/l	NC	20
Barium, Dissolved	0.02419	0.02432	mg/l	1	20
Beryllium, Dissolved	ND	ND	mg/l	NC	20
Cadmium, Dissolved	ND	ND	mg/l	NC	20
Calcium, Dissolved	65.8	65.1	mg/l	1	20
Chromium, Dissolved	ND	ND	mg/l	NC	20
Cobalt, Dissolved	0.03294	0.03303	mg/l	0	20
Copper, Dissolved	0.00052J	0.00047J	mg/l	NC	20
Iron, Dissolved	5.37	5.37	mg/l	0	20
Lead, Dissolved	ND	ND	mg/l	NC	20
Magnesium, Dissolved	6.20	6.16	mg/l	1	20
Manganese, Dissolved	0.8764	0.8730	mg/l	0	20
Nickel, Dissolved	0.01709	0.01726	mg/l	1	20
Potassium, Dissolved	6.04	5.94	mg/l	2	20
Selenium, Dissolved	ND	ND	mg/l	NC	20
Silver, Dissolved	ND	ND	mg/l	NC	20
Sodium, Dissolved	77.6	77.5	mg/l	0	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392311-4 QC Sample: L2029724-07 Client ID: B-3GW					
Thallium, Dissolved	ND	0.00030J	mg/l	NC	20
Vanadium, Dissolved	ND	ND	mg/l	NC	20
Zinc, Dissolved	0.00453J	ND	mg/l	NC	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392313-4 QC Sample: L2029724-05 Client ID: B-1GW					
Aluminum, Total	24.4	25.6	mg/l	5	20
Antimony, Total	0.00087J	0.00198J	mg/l	NC	20
Arsenic, Total	0.02221	0.02328	mg/l	5	20
Barium, Total	0.6390	0.6628	mg/l	4	20
Beryllium, Total	0.00524	0.00550	mg/l	5	20
Cadmium, Total	0.00074	0.00078	mg/l	5	20
Calcium, Total	14.3	14.6	mg/l	2	20
Chromium, Total	1.605	1.656	mg/l	3	20
Cobalt, Total	0.03973	0.04208	mg/l	6	20
Copper, Total	0.07420	0.07905	mg/l	6	20
Iron, Total	150.	155	mg/l	3	20
Lead, Total	0.6725	0.7373	mg/l	9	20
Magnesium, Total	2.92	3.02	mg/l	3	20
Manganese, Total	0.8649	0.8944	mg/l	3	20
Nickel, Total	0.1867	0.1944	mg/l	4	20
Potassium, Total	4.40	4.70	mg/l	7	20
Selenium, Total	0.0162	0.0174	mg/l	7	20
Silver, Total	ND	ND	mg/l	NC	20
Sodium, Total	15.0	15.6	mg/l	4	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392313-4 QC Sample: L2029724-05 Client ID: B-1GW					
Thallium, Total	0.00038J	0.00063	mg/l	NC	20
Vanadium, Total	0.1682	0.1735	mg/l	3	20
Zinc, Total	0.1659	0.1771	mg/l	7	20
Dissolved Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392316-4 QC Sample: L2029724-07 Client ID: B-3GW					
Mercury, Dissolved	ND	ND	mg/l	NC	20
Total Metals - Mansfield Lab Associated sample(s): 05-08 QC Batch ID: WG1392318-4 QC Sample: L2029724-06 Client ID: B-2GW					
Mercury, Total	0.00236	0.00250	mg/l	6	20

INORGANICS
&
MISCELLANEOUS

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-01
Client ID: B-1
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 09:30
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	95.8		%	0.100	NA	1	-	07/15/20 05:21	121,2540G	PR

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-02
Client ID: B-2
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 11:00
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96.8		%	0.100	NA	1	-	07/15/20 05:21	121,2540G	PR

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-03
Client ID: B-3
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:00
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	93.1		%	0.100	NA	1	-	07/15/20 05:57	121,2540G	PR

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

SAMPLE RESULTS

Lab ID: L2029724-04
Client ID: B-4
Sample Location: 10-16 BEACH 19TH STREET, QUEENS, NY, 11691

Date Collected: 07/14/20 12:55
Date Received: 07/14/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	97.7		%	0.100	NA	1	-	07/15/20 06:11	121,2540G	PR

Lab Duplicate Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029724

Report Date: 07/15/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1392282-1 QC Sample: L2029712-01 Client ID: DUP Sample						
Solids, Total	79.8	79.0	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG1392289-1 QC Sample: L2029671-14 Client ID: DUP Sample						
Solids, Total	91.4	91.7	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 04 QC Batch ID: WG1392292-1 QC Sample: L2029724-04 Client ID: B-4						
Solids, Total	97.7	97.7	%	0		20

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2029724-01A	Vial MeOH preserved	A	NA		4.3	Y	Absent		NYTCL-8260HLW(14)
L2029724-01B	Vial water preserved	A	NA		4.3	Y	Absent	15-JUL-20 03:27	NYTCL-8260HLW(14)
L2029724-01C	Vial water preserved	A	NA		4.3	Y	Absent	15-JUL-20 03:27	NYTCL-8260HLW(14)
L2029724-01D	Plastic 2oz unpreserved for TS	A	NA		4.3	Y	Absent		TS(7)
L2029724-01E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.3	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),NI-TI(180),TL-TI(180),AL-TI(180),CR-TI(180),SE-TI(180),ZN-TI(180),CU-TI(180),SB-TI(180),PB-TI(180),V-TI(180),CO-TI(180),FE-TI(180),MN-TI(180),HG-T(28),MG-TI(180),CD-TI(180),K-TI(180),CA-TI(180),NA-TI(180)
L2029724-01F	Glass 250ml/8oz unpreserved	A	NA		4.3	Y	Absent		NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(14)
L2029724-02A	Vial MeOH preserved	A	NA		4.3	Y	Absent		NYTCL-8260HLW(14)
L2029724-02B	Vial water preserved	A	NA		4.3	Y	Absent	15-JUL-20 03:27	NYTCL-8260HLW(14)
L2029724-02C	Vial water preserved	A	NA		4.3	Y	Absent	15-JUL-20 03:27	NYTCL-8260HLW(14)
L2029724-02D	Plastic 2oz unpreserved for TS	A	NA		4.3	Y	Absent		TS(7)
L2029724-02E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),NI-TI(180),TL-TI(180),AL-TI(180),CR-TI(180),CU-TI(180),ZN-TI(180),SB-TI(180),PB-TI(180),SE-TI(180),V-TI(180),CO-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),K-TI(180),NA-TI(180),CD-TI(180),CA-TI(180)
L2029724-02F	Glass 250ml/8oz unpreserved	A	NA		4.3	Y	Absent		NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(14)
L2029724-03A	Vial MeOH preserved	A	NA		4.3	Y	Absent		NYTCL-8260HLW(14)
L2029724-03B	Vial water preserved	A	NA		4.3	Y	Absent	15-JUL-20 03:27	NYTCL-8260HLW(14)
L2029724-03C	Vial water preserved	A	NA		4.3	Y	Absent	15-JUL-20 03:27	NYTCL-8260HLW(14)
L2029724-03D	Plastic 2oz unpreserved for TS	A	NA		4.3	Y	Absent		TS(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2029724-03E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),NI-TI(180),AL-TI(180),CR-TI(180),TL-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),ZN-TI(180),SE-TI(180),V-TI(180),CO-TI(180),FE-TI(180),MG-TI(180),HG-T(28),MN-TI(180),NA-TI(180),K-TI(180),CA-TI(180),CD-TI(180)
L2029724-03F	Glass 250ml/8oz unpreserved	A	NA		4.3	Y	Absent		NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(14)
L2029724-04A	Vial MeOH preserved	A	NA		4.3	Y	Absent		NYTCL-8260HLW(14)
L2029724-04B	Vial water preserved	A	NA		4.3	Y	Absent	15-JUL-20 03:27	NYTCL-8260HLW(14)
L2029724-04C	Vial water preserved	A	NA		4.3	Y	Absent	15-JUL-20 03:27	NYTCL-8260HLW(14)
L2029724-04D	Plastic 2oz unpreserved for TS	A	NA		4.3	Y	Absent		TS(7)
L2029724-04E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.3	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),NI-TI(180),CR-TI(180),AL-TI(180),TL-TI(180),PB-TI(180),SB-TI(180),CU-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),V-TI(180),FE-TI(180),MN-TI(180),MG-TI(180),HG-T(28),NA-TI(180),CD-TI(180),K-TI(180),CA-TI(180)
L2029724-04F	Glass 250ml/8oz unpreserved	A	NA		4.3	Y	Absent		NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(14)
L2029724-05A	Vial HCl preserved	A	NA		4.3	Y	Absent		NYTCL-8260(14)
L2029724-05B	Vial HCl preserved	A	NA		4.3	Y	Absent		NYTCL-8260(14)
L2029724-05C	Vial HCl preserved	A	NA		4.3	Y	Absent		NYTCL-8260(14)
L2029724-05D	Plastic 250ml unpreserved	A	7	7	4.3	Y	Absent		-
L2029724-05E	Plastic 250ml HNO3 preserved	A	<2	<2	4.3	Y	Absent		FE-6020T(180),SE-6020T(180),BA-6020T(180),TL-6020T(180),CR-6020T(180),K-6020T(180),CA-6020T(180),NI-6020T(180),NA-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),SB-6020T(180),V-6020T(180),AS-6020T(180),HG-T(28),AL-6020T(180),MG-6020T(180),AG-6020T(180),CD-6020T(180),CO-6020T(180)
L2029724-05F	Amber 120ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8082-LVI(7)
L2029724-05G	Amber 120ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8082-LVI(7)
L2029724-05H	Amber 120ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8081(7)
L2029724-05I	Amber 120ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8081(7)
L2029724-05J	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2029724-05K	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2029724-05X	Plastic 120ml HNO3 preserved Filtrates	A	NA		4.3	Y	Absent		SE-6020S(180),V-6020S(180),CU-6020S(180),K-6020S(180),MN-6020S(180),BE-6020S(180),CO-6020S(180),MG-6020S(180),ZN-6020S(180),CA-6020S(180),FE-6020S(180),CR-6020S(180),NI-6020S(180),PB-6020S(180),NA-6020S(180),BA-6020S(180),TL-6020S(180),AS-6020S(180),AG-6020S(180),SB-6020S(180),AL-6020S(180),HG-S(28),CD-6020S(180)
L2029724-06A	Vial HCl preserved	A	NA		4.3	Y	Absent		NYTCL-8260(14)
L2029724-06B	Vial HCl preserved	A	NA		4.3	Y	Absent		NYTCL-8260(14)
L2029724-06C	Vial HCl preserved	A	NA		4.3	Y	Absent		NYTCL-8260(14)
L2029724-06D	Plastic 250ml unpreserved	A	7	7	4.3	Y	Absent		-
L2029724-06E	Plastic 250ml HNO3 preserved	A	<2	<2	4.3	Y	Absent		SE-6020T(180),FE-6020T(180),TL-6020T(180),BA-6020T(180),CR-6020T(180),NI-6020T(180),CA-6020T(180),K-6020T(180),ZN-6020T(180),CU-6020T(180),NA-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),SB-6020T(180),AS-6020T(180),V-6020T(180),MG-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),HG-T(28),CO-6020T(180)
L2029724-06F	Amber 120ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8082-LVI(7)
L2029724-06G	Amber 120ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8082-LVI(7)
L2029724-06H	Amber 120ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8081(7)
L2029724-06I	Amber 120ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8081(7)
L2029724-06J	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2029724-06K	Amber 250ml unpreserved	A	7	7	4.3	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2029724-06X	Plastic 120ml HNO3 preserved Filtrates	A	NA		4.3	Y	Absent		SE-6020S(180),V-6020S(180),CU-6020S(180),K-6020S(180),MN-6020S(180),BE-6020S(180),CO-6020S(180),MG-6020S(180),ZN-6020S(180),FE-6020S(180),CA-6020S(180),CR-6020S(180),BA-6020S(180),NI-6020S(180),NA-6020S(180),PB-6020S(180),TL-6020S(180),SB-6020S(180),AG-6020S(180),AS-6020S(180),AL-6020S(180),CD-6020S(180),HG-S(28)
L2029724-07A	Vial HCl preserved	B	NA		2.7	Y	Absent		NYTCL-8260(14)
L2029724-07B	Vial HCl preserved	B	NA		2.7	Y	Absent		NYTCL-8260(14)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2029724-07C	Vial HCl preserved	B	NA		2.7	Y	Absent		NYTCL-8260(14)
L2029724-07D	Plastic 250ml unpreserved	B	7	7	2.7	Y	Absent		-
L2029724-07E	Plastic 250ml HNO3 preserved	B	<2	<2	2.7	Y	Absent		BA-6020T(180),SE-6020T(180),FE-6020T(180),TL-6020T(180),CA-6020T(180),K-6020T(180),NI-6020T(180),CR-6020T(180),NA-6020T(180),ZN-6020T(180),CU-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),V-6020T(180),AS-6020T(180),SB-6020T(180),HG-T(28),AG-6020T(180),CD-6020T(180),MG-6020T(180),AL-6020T(180),CO-6020T(180)
L2029724-07F	Amber 120ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8082-LVI(7)
L2029724-07G	Amber 120ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8082-LVI(7)
L2029724-07H	Amber 120ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8081(7)
L2029724-07I	Amber 120ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8081(7)
L2029724-07J	Amber 250ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2029724-07K	Amber 250ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2029724-07X	Plastic 120ml HNO3 preserved Filtrates	B	NA		2.7	Y	Absent		SE-6020S(180),V-6020S(180),K-6020S(180),CU-6020S(180),MN-6020S(180),BE-6020S(180),MG-6020S(180),CO-6020S(180),ZN-6020S(180),CR-6020S(180),FE-6020S(180),CA-6020S(180),TL-6020S(180),BA-6020S(180),NI-6020S(180),NA-6020S(180),PB-6020S(180),AS-6020S(180),AG-6020S(180),SB-6020S(180),AL-6020S(180),CD-6020S(180),HG-S(28)
L2029724-08A	Vial HCl preserved	B	NA		2.7	Y	Absent		NYTCL-8260(14)
L2029724-08B	Vial HCl preserved	B	NA		2.7	Y	Absent		NYTCL-8260(14)
L2029724-08C	Vial HCl preserved	B	NA		2.7	Y	Absent		NYTCL-8260(14)
L2029724-08D	Plastic 250ml unpreserved	B	7	7	2.7	Y	Absent		-
L2029724-08E	Plastic 250ml HNO3 preserved	B	<2	<2	2.7	Y	Absent		TL-6020T(180),BA-6020T(180),SE-6020T(180),FE-6020T(180),CA-6020T(180),NI-6020T(180),K-6020T(180),CR-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),V-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),AL-6020T(180),HG-T(28),CD-6020T(180),MG-6020T(180),CO-6020T(180)
L2029724-08F	Amber 120ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8082-LVI(7)

*Values in parentheses indicate holding time in days

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029724
Report Date: 07/15/20

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2029724-08G	Amber 120ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8082-LVI(7)
L2029724-08H	Amber 120ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8081(7)
L2029724-08I	Amber 120ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8081(7)
L2029724-08J	Amber 250ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2029724-08K	Amber 250ml unpreserved	B	7	7	2.7	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2029724-08X	Plastic 120ml HNO3 preserved Filtrates	B	NA		2.7	Y	Absent		V-6020S(180),K-6020S(180),CU-6020S(180),SE-6020S(180),MN-6020S(180),ZN-6020S(180),MG-6020S(180),BE-6020S(180),CO-6020S(180),CR-6020S(180),FE-6020S(180),CA-6020S(180),BA-6020S(180),NI-6020S(180),NA-6020S(180),PB-6020S(180),TL-6020S(180),SB-6020S(180),AG-6020S(180),AS-6020S(180),AL-6020S(180),CD-6020S(180),HG-S(28)

*Values in parentheses indicate holding time in days

Project Name:	20-286219.1	**Lab Number:**	L2029724
Project Number:	20-286219.1	**Report Date:**	07/15/20

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	20-286219.1	**Lab Number:**	L2029724
Project Number:	20-286219.1	**Report Date:**	07/15/20

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration. (DoD and NYSDEC Part 375 PFAS only.)

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: DU Report with 'J' Qualifiers

Project Name:	20-286219.1	**Lab Number:**	L2029724
Project Number:	20-286219.1	**Report Date:**	07/15/20

Data Qualifiers

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Project Name:	20-286219.1	**Lab Number:**	L2029724
Project Number:	20-286219.1	**Report Date:**	07/15/20

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 7/14/20

ALPHA Job #: L2029724

Client Information
Client: PSG Env & Geology
Address: 362 Fifth Ave, Suite 501
New York, NY 10001
Phone: 646 273 1290
Fax: 646 513 2381
Email: jlokko@partnersi.com

Project Information
Project Name: 20-286219.1
Project Location: 10-16 Beach 19th Street Queens NY 11691
Project #: 20-286219.1
(Use Project name as Project #): ☐
Project Manager: Andrea Simonson
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☒ 24hrs # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☒ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☒ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

24hrs TAT please

Please specify Metals or TAL. Groundwater metals should be analyzed as both Filtered (Dissolved metals) and Unfiltered (Total metals)

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOCs (8260)	SVOCs (8270)	PCBs (8082)	Pesticides (8081)	TAL Metals (6010/7471)	Dissolved TAL metals	Total TAL (metals)	Sample Specific Comments	Total Bottle
29724-01	B-1	7/14/20	9:30	S	JL	X	X	X	X	X				
-02	B-2	7/14/20	11:00	S	JL	X	X	X	X	X				
-03	B-3	7/14/20	12:00	S	JL	X	X	X	X	X				
-04	B-4	7/14/20	12:55	S	JL	X	X	X	X	X				
-05	B-1GW	7/14/20	9:45	GW	JL	X	X	X	X	X	X	X		
-06	B-2GW	7/14/20	11:15	GW	JL	X	X	X	X	X	X	X		
-07	B-3GW	7/14/20	12:10	GW	JL	X	X	X	X	X	X	X		
-08	B-4GW	7/14/20	13:15	GW	JL	X	X	X	X	X	X	X		

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type									
Preservative									

Relinquished By:	Date/Time	Received By:	Date/Time
Jokko	7/10/20	Don D AAL	7/14/20 1635
Don D AAL	7/14/20 1815	AAL	7/14/20 19:00
AAL	7/14/20 23:00		7/14/20 23:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2029051
Client:	Partner Engineering & Science, Inc. 611 Industrial Way West Eatontown, NJ 07724
ATTN:	Andres Simonson
Phone:	(732) 380-1700
Project Name:	20-286219.1
Project Number:	20-286219.1
Report Date:	07/13/20

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029051
Report Date: 07/13/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2029051-01	SG-1	SOIL_VAPOR	10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691	07/09/20 12:19	07/09/20
L2029051-02	SG-2	SOIL_VAPOR	10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691	07/09/20 12:28	07/09/20
L2029051-03	SG-3	SOIL_VAPOR	10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691	07/09/20 12:42	07/09/20
L2029051-04	SG-4	SOIL_VAPOR	10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691	07/09/20 12:54	07/09/20

Project Name:	20-286219.1	**Lab Number:**	L2029051
Project Number:	20-286219.1	**Report Date:**	07/13/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	20-286219.1	**Lab Number:**	L2029051
Project Number:	20-286219.1	**Report Date:**	07/13/20

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on July 8, 2020. The canister certification results are provided as an addendum.

L2029051-01-03: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

The continuing calibration standard, associated with L2029051-01 through -04, is outside the %D criteria for Hexachlorobutadiene (36%D); however, it is non detect in all samples.

The WG1391163-3 LCS recovery for hexachlorobutadiene (136%) is above the upper 130% acceptance limit. All samples associated with this LCS do not have reportable amounts of this analyte.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 07/13/20

AIR

Project Name: 20-286219.1 ***Lab Number:*** L2029051

Project Number: 20-286219.1 ***Report Date:*** 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-01 D
Client ID: SG-1
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691
Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 07/11/20 20:45
Analyst: TS

Date Collected: 07/09/20 12:19
Date Received: 07/09/20
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	0.833	--	ND	4.12	--		4.167
Chloromethane	ND	0.833	--	ND	1.72	--		4.167
Freon-114	ND	0.833	--	ND	5.82	--		4.167
Vinyl chloride	ND	0.833	--	ND	2.13	--		4.167
1,3-Butadiene	ND	0.833	--	ND	1.84	--		4.167
Bromomethane	ND	0.833	--	ND	3.23	--		4.167
Chloroethane	ND	0.833	--	ND	2.20	--		4.167
Ethanol	21.4	20.8	--	40.3	39.2	--		4.167
Vinyl bromide	ND	0.833	--	ND	3.64	--		4.167
Acetone	8.60	4.17	--	20.4	9.91	--		4.167
Trichlorofluoromethane	ND	0.833	--	ND	4.68	--		4.167
Isopropanol	ND	2.08	--	ND	5.11	--		4.167
1,1-Dichloroethene	ND	0.833	--	ND	3.30	--		4.167
Tertiary butyl Alcohol	ND	2.08	--	ND	6.31	--		4.167
Methylene chloride	ND	2.08	--	ND	7.23	--		4.167
3-Chloropropene	ND	0.833	--	ND	2.61	--		4.167
Carbon disulfide	ND	0.833	--	ND	2.59	--		4.167
Freon-113	ND	0.833	--	ND	6.38	--		4.167
trans-1,2-Dichloroethene	ND	0.833	--	ND	3.30	--		4.167
1,1-Dichloroethane	ND	0.833	--	ND	3.37	--		4.167
Methyl tert butyl ether	ND	0.833	--	ND	3.00	--		4.167
2-Butanone	ND	2.08	--	ND	6.13	--		4.167
cis-1,2-Dichloroethene	ND	0.833	--	ND	3.30	--		4.167

Project Name: 20-286219.1 ***Lab Number:*** L2029051

Project Number: 20-286219.1 ***Report Date:*** 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-01 D
Client ID: SG-1
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691
Sample Depth:

Date Collected: 07/09/20 12:19
Date Received: 07/09/20
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	2.08	--	ND	7.50	--		4.167
Chloroform	1.72	0.833	--	8.40	4.07	--		4.167
Tetrahydrofuran	ND	2.08	--	ND	6.13	--		4.167
1,2-Dichloroethane	ND	0.833	--	ND	3.37	--		4.167
n-Hexane	6.41	0.833	--	22.6	2.94	--		4.167
1,1,1-Trichloroethane	ND	0.833	--	ND	4.54	--		4.167
Benzene	ND	0.833	--	ND	2.66	--		4.167
Carbon tetrachloride	ND	0.833	--	ND	5.24	--		4.167
Cyclohexane	1.22	0.833	--	4.20	2.87	--		4.167
1,2-Dichloropropane	ND	0.833	--	ND	3.85	--		4.167
Bromodichloromethane	ND	0.833	--	ND	5.58	--		4.167
1,4-Dioxane	ND	0.833	--	ND	3.00	--		4.167
Trichloroethene	1.21	0.833	--	6.50	4.48	--		4.167
2,2,4-Trimethylpentane	ND	0.833	--	ND	3.89	--		4.167
Heptane	0.983	0.833	--	4.03	3.41	--		4.167
cis-1,3-Dichloropropene	ND	0.833	--	ND	3.78	--		4.167
4-Methyl-2-pentanone	ND	2.08	--	ND	8.52	--		4.167
trans-1,3-Dichloropropene	ND	0.833	--	ND	3.78	--		4.167
1,1,2-Trichloroethane	ND	0.833	--	ND	4.54	--		4.167
Toluene	1.99	0.833	--	7.50	3.14	--		4.167
2-Hexanone	ND	0.833	--	ND	3.41	--		4.167
Dibromochloromethane	ND	0.833	--	ND	7.10	--		4.167
1,2-Dibromoethane	ND	0.833	--	ND	6.40	--		4.167
Tetrachloroethene	246	0.833	--	1670	5.65	--		4.167
Chlorobenzene	ND	0.833	--	ND	3.84	--		4.167
Ethylbenzene	ND	0.833	--	ND	3.62	--		4.167

Project Name: 20-286219.1 ***Lab Number:*** L2029051

Project Number: 20-286219.1 ***Report Date:*** 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-01 D
Client ID: SG-1
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691
Sample Depth:

Date Collected: 07/09/20 12:19
Date Received: 07/09/20
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	1.67	--	ND	7.25	--		4.167
Bromoform	ND	0.833	--	ND	8.61	--		4.167
Styrene	ND	0.833	--	ND	3.55	--		4.167
1,1,2,2-Tetrachloroethane	ND	0.833	--	ND	5.72	--		4.167
o-Xylene	ND	0.833	--	ND	3.62	--		4.167
4-Ethyltoluene	ND	0.833	--	ND	4.10	--		4.167
1,3,5-Trimethylbenzene	ND	0.833	--	ND	4.10	--		4.167
1,2,4-Trimethylbenzene	ND	0.833	--	ND	4.10	--		4.167
Benzyl chloride	ND	0.833	--	ND	4.31	--		4.167
1,3-Dichlorobenzene	ND	0.833	--	ND	5.01	--		4.167
1,4-Dichlorobenzene	ND	0.833	--	ND	5.01	--		4.167
1,2-Dichlorobenzene	ND	0.833	--	ND	5.01	--		4.167
1,2,4-Trichlorobenzene	ND	0.833	--	ND	6.18	--		4.167
Hexachlorobutadiene	ND	0.833	--	ND	8.89	--		4.167

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	101		60-140
Bromochloromethane	101		60-140
chlorobenzene-d5	99		60-140

Project Name: 20-286219.1 ***Lab Number:*** L2029051

Project Number: 20-286219.1 ***Report Date:*** 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-02 D
Client ID: SG-2
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691
Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 07/11/20 21:22
Analyst: TS

Date Collected: 07/09/20 12:28
Date Received: 07/09/20
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	ND	2.50	--	ND	12.4	--		12.5
Chloromethane	ND	2.50	--	ND	5.16	--		12.5
Freon-114	ND	2.50	--	ND	17.5	--		12.5
Vinyl chloride	ND	2.50	--	ND	6.39	--		12.5
1,3-Butadiene	ND	2.50	--	ND	5.53	--		12.5
Bromomethane	ND	2.50	--	ND	9.71	--		12.5
Chloroethane	ND	2.50	--	ND	6.60	--		12.5
Ethanol	ND	62.5	--	ND	118	--		12.5
Vinyl bromide	ND	2.50	--	ND	10.9	--		12.5
Acetone	ND	12.5	--	ND	29.7	--		12.5
Trichlorofluoromethane	ND	2.50	--	ND	14.0	--		12.5
Isopropanol	ND	6.25	--	ND	15.4	--		12.5
1,1-Dichloroethene	ND	2.50	--	ND	9.91	--		12.5
Tertiary butyl Alcohol	ND	6.25	--	ND	18.9	--		12.5
Methylene chloride	ND	6.25	--	ND	21.7	--		12.5
3-Chloropropene	ND	2.50	--	ND	7.83	--		12.5
Carbon disulfide	ND	2.50	--	ND	7.79	--		12.5
Freon-113	ND	2.50	--	ND	19.2	--		12.5
trans-1,2-Dichloroethene	ND	2.50	--	ND	9.91	--		12.5
1,1-Dichloroethane	ND	2.50	--	ND	10.1	--		12.5
Methyl tert butyl ether	ND	2.50	--	ND	9.01	--		12.5
2-Butanone	ND	6.25	--	ND	18.4	--		12.5
cis-1,2-Dichloroethene	ND	2.50	--	ND	9.91	--		12.5

Project Name: 20-286219.1 ***Lab Number:*** L2029051

Project Number: 20-286219.1 ***Report Date:*** 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-02 D
Client ID: SG-2
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691
Sample Depth:

Date Collected: 07/09/20 12:28
Date Received: 07/09/20
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	6.25	--	ND	22.5	--		12.5
Chloroform	ND	2.50	--	ND	12.2	--		12.5
Tetrahydrofuran	ND	6.25	--	ND	18.4	--		12.5
1,2-Dichloroethane	ND	2.50	--	ND	10.1	--		12.5
n-Hexane	6.42	2.50	--	22.6	8.81	--		12.5
1,1,1-Trichloroethane	ND	2.50	--	ND	13.6	--		12.5
Benzene	ND	2.50	--	ND	7.99	--		12.5
Carbon tetrachloride	ND	2.50	--	ND	15.7	--		12.5
Cyclohexane	ND	2.50	--	ND	8.61	--		12.5
1,2-Dichloropropane	ND	2.50	--	ND	11.6	--		12.5
Bromodichloromethane	ND	2.50	--	ND	16.7	--		12.5
1,4-Dioxane	ND	2.50	--	ND	9.01	--		12.5
Trichloroethene	ND	2.50	--	ND	13.4	--		12.5
2,2,4-Trimethylpentane	ND	2.50	--	ND	11.7	--		12.5
Heptane	3.24	2.50	--	13.3	10.2	--		12.5
cis-1,3-Dichloropropene	ND	2.50	--	ND	11.3	--		12.5
4-Methyl-2-pentanone	ND	6.25	--	ND	25.6	--		12.5
trans-1,3-Dichloropropene	ND	2.50	--	ND	11.3	--		12.5
1,1,2-Trichloroethane	ND	2.50	--	ND	13.6	--		12.5
Toluene	ND	2.50	--	ND	9.42	--		12.5
2-Hexanone	ND	2.50	--	ND	10.2	--		12.5
Dibromochloromethane	ND	2.50	--	ND	21.3	--		12.5
1,2-Dibromoethane	ND	2.50	--	ND	19.2	--		12.5
Tetrachloroethene	643	2.50	--	4360	17.0	--		12.5
Chlorobenzene	ND	2.50	--	ND	11.5	--		12.5
Ethylbenzene	ND	2.50	--	ND	10.9	--		12.5

Project Name: 20-286219.1 ***Lab Number:*** L2029051

Project Number: 20-286219.1 ***Report Date:*** 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-02 D
Client ID: SG-2
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691
Sample Depth:

Date Collected: 07/09/20 12:28
Date Received: 07/09/20
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	ND	5.00	--	ND	21.7	--		12.5
Bromoform	ND	2.50	--	ND	25.8	--		12.5
Styrene	ND	2.50	--	ND	10.6	--		12.5
1,1,2,2-Tetrachloroethane	ND	2.50	--	ND	17.2	--		12.5
o-Xylene	ND	2.50	--	ND	10.9	--		12.5
4-Ethyltoluene	ND	2.50	--	ND	12.3	--		12.5
1,3,5-Trimethylbenzene	ND	2.50	--	ND	12.3	--		12.5
1,2,4-Trimethylbenzene	ND	2.50	--	ND	12.3	--		12.5
Benzyl chloride	ND	2.50	--	ND	12.9	--		12.5
1,3-Dichlorobenzene	ND	2.50	--	ND	15.0	--		12.5
1,4-Dichlorobenzene	ND	2.50	--	ND	15.0	--		12.5
1,2-Dichlorobenzene	ND	2.50	--	ND	15.0	--		12.5
1,2,4-Trichlorobenzene	ND	2.50	--	ND	18.6	--		12.5
Hexachlorobutadiene	ND	2.50	--	ND	26.7	--		12.5

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	98		60-140
Bromochloromethane	99		60-140
chlorobenzene-d5	96		60-140

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029051
Report Date: 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-03 D
Client ID: SG-3
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691
Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 07/11/20 22:01
Analyst: TS

Date Collected: 07/09/20 12:42
Date Received: 07/09/20
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.486	0.400	--	2.40	1.98	--		2
Chloromethane	ND	0.400	--	ND	0.826	--		2
Freon-114	ND	0.400	--	ND	2.80	--		2
Vinyl chloride	ND	0.400	--	ND	1.02	--		2
1,3-Butadiene	0.554	0.400	--	1.23	0.885	--		2
Bromomethane	ND	0.400	--	ND	1.55	--		2
Chloroethane	ND	0.400	--	ND	1.06	--		2
Ethanol	24.2	10.0	--	45.6	18.8	--		2
Vinyl bromide	ND	0.400	--	ND	1.75	--		2
Acetone	56.5	2.00	--	134	4.75	--		2
Trichlorofluoromethane	ND	0.400	--	ND	2.25	--		2
Isopropanol	2.83	1.00	--	6.96	2.46	--		2
1,1-Dichloroethene	ND	0.400	--	ND	1.59	--		2
Tertiary butyl Alcohol	ND	1.00	--	ND	3.03	--		2
Methylene chloride	ND	1.00	--	ND	3.47	--		2
3-Chloropropene	ND	0.400	--	ND	1.25	--		2
Carbon disulfide	ND	0.400	--	ND	1.25	--		2
Freon-113	ND	0.400	--	ND	3.07	--		2
trans-1,2-Dichloroethene	ND	0.400	--	ND	1.59	--		2
1,1-Dichloroethane	ND	0.400	--	ND	1.62	--		2
Methyl tert butyl ether	ND	0.400	--	ND	1.44	--		2
2-Butanone	6.39	1.00	--	18.8	2.95	--		2
cis-1,2-Dichloroethene	ND	0.400	--	ND	1.59	--		2

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029051
Report Date: 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-03 D
Client ID: SG-3
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691
Sample Depth:

Date Collected: 07/09/20 12:42
Date Received: 07/09/20
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	1.00	--	ND	3.60	--		2
Chloroform	ND	0.400	--	ND	1.95	--		2
Tetrahydrofuran	ND	1.00	--	ND	2.95	--		2
1,2-Dichloroethane	ND	0.400	--	ND	1.62	--		2
n-Hexane	ND	0.400	--	ND	1.41	--		2
1,1,1-Trichloroethane	ND	0.400	--	ND	2.18	--		2
Benzene	0.928	0.400	--	2.96	1.28	--		2
Carbon tetrachloride	ND	0.400	--	ND	2.52	--		2
Cyclohexane	ND	0.400	--	ND	1.38	--		2
1,2-Dichloropropane	ND	0.400	--	ND	1.85	--		2
Bromodichloromethane	ND	0.400	--	ND	2.68	--		2
1,4-Dioxane	ND	0.400	--	ND	1.44	--		2
Trichloroethene	ND	0.400	--	ND	2.15	--		2
2,2,4-Trimethylpentane	ND	0.400	--	ND	1.87	--		2
Heptane	0.518	0.400	--	2.12	1.64	--		2
cis-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
4-Methyl-2-pentanone	ND	1.00	--	ND	4.10	--		2
trans-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
1,1,2-Trichloroethane	ND	0.400	--	ND	2.18	--		2
Toluene	1.04	0.400	--	3.92	1.51	--		2
2-Hexanone	ND	0.400	--	ND	1.64	--		2
Dibromochloromethane	ND	0.400	--	ND	3.41	--		2
1,2-Dibromoethane	ND	0.400	--	ND	3.07	--		2
Tetrachloroethene	140	0.400	--	949	2.71	--		2
Chlorobenzene	ND	0.400	--	ND	1.84	--		2
Ethylbenzene	ND	0.400	--	ND	1.74	--		2

Project Name: 20-286219.1 ***Lab Number:*** L2029051

Project Number: 20-286219.1 ***Report Date:*** 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-03 D
Client ID: SG-3
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691
Sample Depth:

Date Collected: 07/09/20 12:42
Date Received: 07/09/20
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	0.866	0.800	--	3.76	3.47	--		2
Bromoform	ND	0.400	--	ND	4.14	--		2
Styrene	ND	0.400	--	ND	1.70	--		2
1,1,2,2-Tetrachloroethane	ND	0.400	--	ND	2.75	--		2
o-Xylene	0.582	0.400	--	2.53	1.74	--		2
4-Ethyltoluene	ND	0.400	--	ND	1.97	--		2
1,3,5-Trimethylbenzene	0.684	0.400	--	3.36	1.97	--		2
1,2,4-Trimethylbenzene	1.05	0.400	--	5.16	1.97	--		2
Benzyl chloride	ND	0.400	--	ND	2.07	--		2
1,3-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,4-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,2-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,2,4-Trichlorobenzene	ND	0.400	--	ND	2.97	--		2
Hexachlorobutadiene	ND	0.400	--	ND	4.27	--		2

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	101		60-140
Bromochloromethane	101		60-140
chlorobenzene-d5	98		60-140

Project Name: 20-286219.1 ***Lab Number:*** L2029051

Project Number: 20-286219.1 ***Report Date:*** 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-04
Client ID: SG-4
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691
Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 07/11/20 22:40
Analyst: TS

Date Collected: 07/09/20 12:54
Date Received: 07/09/20
Field Prep: Not Specified

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.685	0.200	--	3.39	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	0.876	0.200	--	1.94	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	6.94	5.00	--	13.1	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	4.74	1.00	--	11.3	2.38	--		1
Trichlorofluoromethane	0.312	0.200	--	1.75	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.665	0.200	--	2.07	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	0.751	0.500	--	2.21	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: 20-286219.1 ***Lab Number:*** L2029051

Project Number: 20-286219.1 ***Report Date:*** 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-04
Client ID: SG-4
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691

Date Collected: 07/09/20 12:54
Date Received: 07/09/20
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.357	0.200	--	1.74	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	0.774	0.200	--	2.73	0.705	--		1
1,1,1-Trichloroethane	0.218	0.200	--	1.19	1.09	--		1
Benzene	0.247	0.200	--	0.789	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	0.525	0.200	--	1.81	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	0.487	0.200	--	2.00	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	0.262	0.200	--	0.987	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	13.4	0.200	--	90.9	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	0.222	0.200	--	0.964	0.869	--		1

Project Name: 20-286219.1 ***Lab Number:*** L2029051

Project Number: 20-286219.1 ***Report Date:*** 07/13/20

SAMPLE RESULTS

Lab ID: L2029051-04
Client ID: SG-4
Sample Location: 10-16 BEACH 19 TH STREET, QUEENS, NEW YORK, 11691
Sample Depth:

Date Collected: 07/09/20 12:54
Date Received: 07/09/20
Field Prep: Not Specified

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	0.401	0.400	--	1.74	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	0.234	0.200	--	1.02	0.869	--		1
4-Ethyltoluene	0.224	0.200	--	1.10	0.983	--		1
1,3,5-Trimethylbenzene	0.436	0.200	--	2.14	0.983	--		1
1,2,4-Trimethylbenzene	0.682	0.200	--	3.35	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	101		60-140
Bromochloromethane	101		60-140
chlorobenzene-d5	98		60-140

Project Name: 20-286219.1 **Lab Number:** L2029051

Project Number: 20-286219.1 **Report Date:** 07/13/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 07/11/20 16:14

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1391163-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1

Project Name: 20-286219.1 **Lab Number:** L2029051

Project Number: 20-286219.1 **Report Date:** 07/13/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 07/11/20 16:14

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1391163-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1

Project Name: 20-286219.1 **Lab Number:** L2029051

Project Number: 20-286219.1 **Report Date:** 07/13/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 07/11/20 16:14

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-04 Batch: WG1391163-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029051

Report Date: 07/13/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1391163-3								
Dichlorodifluoromethane	111		-		70-130	-		
Chloromethane	104		-		70-130	-		
Freon-114	110		-		70-130	-		
Vinyl chloride	108		-		70-130	-		
1,3-Butadiene	111		-		70-130	-		
Bromomethane	109		-		70-130	-		
Chloroethane	110		-		70-130	-		
Ethanol	99		-		40-160	-		
Vinyl bromide	108		-		70-130	-		
Acetone	88		-		40-160	-		
Trichlorofluoromethane	114		-		70-130	-		
Isopropanol	91		-		40-160	-		
1,1-Dichloroethene	109		-		70-130	-		
Tertiary butyl Alcohol	105		-		70-130	-		
Methylene chloride	106		-		70-130	-		
3-Chloropropene	116		-		70-130	-		
Carbon disulfide	103		-		70-130	-		
Freon-113	113		-		70-130	-		
trans-1,2-Dichloroethene	109		-		70-130	-		
1,1-Dichloroethane	110		-		70-130	-		
Methyl tert butyl ether	106		-		70-130	-		
2-Butanone	113		-		70-130	-		
cis-1,2-Dichloroethene	113		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029051
Report Date: 07/13/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1391163-3								
Ethyl Acetate	128		-		70-130	-		
Chloroform	111		-		70-130	-		
Tetrahydrofuran	113		-		70-130	-		
1,2-Dichloroethane	103		-		70-130	-		
n-Hexane	110		-		70-130	-		
1,1,1-Trichloroethane	102		-		70-130	-		
Benzene	104		-		70-130	-		
Carbon tetrachloride	107		-		70-130	-		
Cyclohexane	112		-		70-130	-		
1,2-Dichloropropane	111		-		70-130	-		
Bromodichloromethane	110		-		70-130	-		
1,4-Dioxane	112		-		70-130	-		
Trichloroethene	111		-		70-130	-		
2,2,4-Trimethylpentane	114		-		70-130	-		
Heptane	109		-		70-130	-		
cis-1,3-Dichloropropene	111		-		70-130	-		
4-Methyl-2-pentanone	110		-		70-130	-		
trans-1,3-Dichloropropene	94		-		70-130	-		
1,1,2-Trichloroethane	113		-		70-130	-		
Toluene	114		-		70-130	-		
2-Hexanone	111		-		70-130	-		
Dibromochloromethane	123		-		70-130	-		
1,2-Dibromoethane	115		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20-286219.1

Project Number: 20-286219.1

Lab Number: L2029051

Report Date: 07/13/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-04 Batch: WG1391163-3								
Tetrachloroethene	116		-		70-130	-		
Chlorobenzene	115		-		70-130	-		
Ethylbenzene	118		-		70-130	-		
p/m-Xylene	117		-		70-130	-		
Bromoform	130		-		70-130	-		
Styrene	118		-		70-130	-		
1,1,2,2-Tetrachloroethane	126		-		70-130	-		
o-Xylene	119		-		70-130	-		
4-Ethyltoluene	121		-		70-130	-		
1,3,5-Trimethylbenzene	120		-		70-130	-		
1,2,4-Trimethylbenzene	125		-		70-130	-		
Benzyl chloride	127		-		70-130	-		
1,3-Dichlorobenzene	121		-		70-130	-		
1,4-Dichlorobenzene	116		-		70-130	-		
1,2-Dichlorobenzene	124		-		70-130	-		
1,2,4-Trichlorobenzene	116		-		70-130	-		
Hexachlorobutadiene	**136**	Q	-		70-130	-		

Project Name: 20-286219.1 **Lab Number:** L2029051

Project Number: 20-286219.1 **Report Date:** 07/13/20

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2029051-01	SG-1	0889	SV200	07/08/20	325741		-	-	-	Pass	219	227	4
L2029051-01	SG-1	507	2.7L Can	07/08/20	325741	L2027466-02	Pass	-29.4	0.0	-	-	-	-
L2029051-02	SG-2	0888	SV200	07/08/20	325741		-	-	-	Pass	217	226	4
L2029051-02	SG-2	251	2.7L Can	07/08/20	325741	L2027466-02	Pass	-29.4	0.0	-	-	-	-
L2029051-03	SG-3	01907	SV200	07/08/20	325741		-	-	-	Pass	218	227	4
L2029051-03	SG-3	561	2.7L Can	07/08/20	325741	L2027466-02	Pass	-29.4	0.0	-	-	-	-
L2029051-04	SG-4	0514	SV200	07/08/20	325741		-	-	-	Pass	217	226	4
L2029051-04	SG-4	1745	2.7L Can	07/08/20	325741	L2027466-02	Pass	-29.4	0.0	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2027466
Report Date: 07/13/20

Air Canister Certification Results

Lab ID: L2027466-02
Client ID: CAN 1728 SHELF 3
Sample Location:

Date Collected: 06/29/20 16:00
Date Received: 06/30/20
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 07/03/20 21:50
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2027466
Report Date: 07/13/20

Air Canister Certification Results

Lab ID: L2027466-02
Client ID: CAN 1728 SHELF 3
Sample Location:

Date Collected: 06/29/20 16:00
Date Received: 06/30/20
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2027466
Report Date: 07/13/20

Air Canister Certification Results

Lab ID: L2027466-02
Client ID: CAN 1728 SHELF 3
Sample Location:

Date Collected: 06/29/20 16:00
Date Received: 06/30/20
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2027466
Report Date: 07/13/20

Air Canister Certification Results

Lab ID: L2027466-02
Client ID: CAN 1728 SHELF 3
Sample Location:

Date Collected: 06/29/20 16:00
Date Received: 06/30/20
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2027466
Report Date: 07/13/20

Air Canister Certification Results

Lab ID: L2027466-02
Client ID: CAN 1728 SHELF 3
Sample Location:

Date Collected: 06/29/20 16:00
Date Received: 06/30/20
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	104		60-140
Bromochloromethane	105		60-140
chlorobenzene-d5	104		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2027466
Report Date: 07/13/20

Air Canister Certification Results

Lab ID: L2027466-02
Client ID: CAN 1728 SHELF 3
Sample Location:

Date Collected: 06/29/20 16:00
Date Received: 06/30/20
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/03/20 21:50
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2027466
Report Date: 07/13/20

Air Canister Certification Results

Lab ID: L2027466-02
Client ID: CAN 1728 SHELF 3
Sample Location:

Date Collected: 06/29/20 16:00
Date Received: 06/30/20
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.050	--	ND	0.188	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2027466
Report Date: 07/13/20

Air Canister Certification Results

Lab ID: L2027466-02
Client ID: CAN 1728 SHELF 3
Sample Location:

Date Collected: 06/29/20 16:00
Date Received: 06/30/20
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	105		60-140
chlorobenzene-d5	105		60-140

Project Name: 20-286219.1
Project Number: 20-286219.1

Lab Number: L2029051
Report Date: 07/13/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2029051-01A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2029051-02A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2029051-03A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)
L2029051-04A	Canister - 2.7 Liter	NA	NA			Y	Absent		TO15-LL(30)

*Values in parentheses indicate holding time in days

Project Name:	20-286219.1	**Lab Number:**	L2029051
Project Number:	20-286219.1	**Report Date:**	07/13/20

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: Data Usability Report

Project Name:	20-286219.1	**Lab Number:**	L2029051
Project Number:	20-286219.1	**Report Date:**	07/13/20

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration. (DoD and NYSDEC Part 375 PFAS only.)

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration

Report Format: Data Usability Report

Project Name:	20-286219.1	**Lab Number:**	L2029051
Project Number:	20-286219.1	**Report Date:**	07/13/20

Data Qualifiers

Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	20-286219.1	**Lab Number:**	L2029051
Project Number:	20-286219.1	**Report Date:**	07/13/20

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

AIR ANALYSIS

PAGE 1 OF 1

ALPHA ANALYTICAL — CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 7/10/20

ALPHA Job #: L2029051

Client Information

Client: PSG Engineering & Geology
Address: 362 Fifth Ave, Suite 501
New York, NY 10001
Phone: 646 273-1290
Fax: 646 513-2321
Email: jlokke@partnersi.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 20-286219.1
Project Location: 19-16 Beach 19th Street Queens New York 11691
Project #: 20-286219.1
Project Manager: Andres Simonson
ALPHA Quote #:

Turn-Around Time

☐ Standard ☑ RUSH (only confirmed if pre-approved) 48hrs TAT

Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☑ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments: 48hrs TAT please

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15 VOCs	TO-15 SIM	APH Subject Non-petroleum HCs	Fixed Gases ☐	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
29051-01	SG-1	7/9/20	12:09	12:19	29.91	0.95	SV	JL	2.7L	507	0889	X					
02	SG-2	7/9/20	12:18	12:28	30.12	0.60	SV	JL	2.7L	251	0882	X					
03	SG-3	7/9/20	12:32	12:42	29.71	0.10	SV	JL	2.7L	561	01907	X					
04	SG-4	7/9/20	12:44	12:54	25.87	0.28	SV	JL	2.7L	1745	0514	X					

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
	7/9/20		7-9-20
	7-9-20 1221		7/9/20 2205
	7/10/20 0320		7/10/20 03:20

Form No: 101-01 (Rev: (25-Sep-15)

APPENDIX D: EPA CALCULATED VISLS COMMERCIAL

PSG

Site-specific VISL Results
Commercial Equation Inputs

*** Inputted values different from Commercial defaults are highlighted.**
Output generated 13JUL2020:19:03:15

Variable	Commercial Air Default Value	Form-input Value
AF_{gw} (Attenuation Factor Groundwater) unitless	0.001	0.001
AF_{ss} (Attenuation Factor Sub-Slab) unitless	0.03	0.03
AT_{w} (averaging time - composite worker)	365	365
ED_{w} (exposure duration - composite worker) yr	25	25
EF_{w} (exposure frequency - composite worker) day/yr	250	250
ET_{w} (exposure time - composite worker) hr	8	8
THQ (target hazard quotient) unitless	0.1	0.1
LT (lifetime) yr	70	70
TR (target risk) unitless	1.0E-06	1.0E-04

Commercial Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source? ($C_{vp} > C_{i,a}$,Target?)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source? ($C_{hc} > C_{i,a}$,Target?)	Target Indoor Air Concentration (TCR=0.0001 or THQ=0.1) MIN($C_{ia,c}$,$C_{ia,nc}$) ($\mu g/m^3$)	Toxicity Basis
Acetone	67-64-1	Yes	Yes	Yes	Yes	1.35E+04	NC
Benzene	71-43-2	Yes	Yes	Yes	Yes	1.31E+01	NC
Butadiene, 1,3-	106-99-0	Yes	Yes	Yes	Yes	8.76E-01	NC
Carbon Disulfide	75-15-0	Yes	Yes	Yes	Yes	3.07E+02	NC
Chloroform	67-66-3	Yes	Yes	Yes	Yes	4.28E+01	NC
Cyclohexane	110-82-7	Yes	Yes	Yes	Yes	2.63E+03	NC
Dichlorodifluoromethane	75-71-8	Yes	Yes	Yes	Yes	4.38E+01	NC
Ethanol	64-17-5	Yes	No	No Inhal. Tox. Info	No Inhal. Tox. Info		
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	4.38E+02	NC
Heptane, N-	142-82-5	Yes	Yes	Yes	Yes	1.75E+02	NC
Hexane, N-	110-54-3	Yes	Yes	Yes	Yes	3.07E+02	NC
Isopropanol	67-63-0	Yes	Yes	Yes	Yes	8.76E+01	NC
Methyl Ethyl Ketone (2-Butanone)	78-93-3	Yes	Yes	Yes	Yes	2.19E+03	NC
Tetrachloroethylene	127-18-4	Yes	Yes	Yes	Yes	1.75E+01	NC
Toluene	108-88-3	Yes	Yes	Yes	Yes	2.19E+03	NC
Trichloroethane, 1,1,1-	71-55-6	Yes	Yes	Yes	Yes	2.19E+03	NC
Trichloroethylene	79-01-6	Yes	Yes	Yes	Yes	8.76E-01	NC
Trichlorofluoromethane	75-69-4	Yes	No	No Inhal. Tox. Info	No Inhal. Tox. Info		
Trimethylbenzene, 1,2,4-	95-63-6	Yes	Yes	Yes	Yes	2.63E+01	NC
Trimethylbenzene, 1,3,5-	108-67-8	Yes	Yes	Yes	Yes	2.63E+01	NC
Xylene, o-	95-47-6	Yes	Yes	Yes	Yes	4.38E+01	NC

Commercial Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	Target Sub-Slab and Near-source Soil Gas Concentration (TCR=0.0001 or THQ=0.1) C_{sg},Target (µg/m³)	Target Groundwater Concentration (TCR=0.0001 or THQ=0.1) C_{gw},Target (µg/L)	Is Target Groundwater Concentration < MCL? (C_{gw} < MCL?)	Pure Phase Vapor Concentration C_{vp}\ (25 ℃)\ (µg/m³)	Maximum Groundwater Vapor Concentration C_{hc}\ (µg/m³)	Temperature for Maximum Groundwater Vapor Concentration (℃)	Lower Explosive Limit LEL (% by volume)
Acetone	4.51E+05	9.46E+06	--	7.25E+08	1.43E+09	25	2.50
Benzene	4.38E+02	5.79E+01	No (5)	3.98E+08	4.06E+08	25	1.20
Butadiene, 1,3-	2.92E+01	2.91E-01	--	6.14E+09	2.21E+09	25	2.00
Carbon Disulfide	1.02E+04	5.21E+02	--	1.47E+09	1.27E+09	25	1.30
Chloroform	1.43E+03	2.85E+02	No (80)	1.26E+09	1.19E+09	25	
Cyclohexane	8.76E+04	4.29E+02	--	4.39E+08	3.37E+08	25	1.30
Dichlorodifluoromethane	1.46E+03	3.12E+00	--	3.15E+10	3.93E+09	25	
Ethanol				1.47E+08	2.04E+08	25	3.30
Ethylbenzene	1.46E+04	1.36E+03	No (700)	5.48E+07	5.44E+07	25	0.80
Heptane, N-	5.84E+03	2.14E+00	--	2.48E+08	2.78E+08	25	1.05
Hexane, N-	1.02E+04	4.17E+00	--	7.00E+08	6.99E+08	25	1.10
Isopropanol	2.92E+03	2.65E+05	--	1.47E+08	3.31E+08	25	2.00
Methyl Ethyl Ketone (2-Butanone)	7.30E+04	9.41E+05	--	3.51E+08	5.19E+08	25	1.40
Tetrachloroethylene	5.84E+02	2.42E+01	No (5)	1.65E+08	1.49E+08	25	
Toluene	7.30E+04	8.07E+03	No (1000)	1.41E+08	1.43E+08	25	1.10
Trichloroethane, 1,1,1-	7.30E+04	3.11E+03	No (200)	8.90E+08	9.07E+08	25	8.00
Trichloroethylene	2.92E+01	2.18E+00	Yes (5)	4.88E+08	5.15E+08	25	8.00
Trichlorofluoromethane				5.93E+09	4.36E+09	25	
Trimethylbenzene, 1,2,4-	8.76E+02	1.04E+02	--	1.36E+07	1.44E+07	25	0.90
Trimethylbenzene, 1,3,5-	8.76E+02	7.33E+01	--	1.60E+07	1.73E+07	25	1.00
Xylene, o-	1.46E+03	2.07E+02	--	3.77E+07	3.77E+07	25	0.90

Commercial Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	LEL Ref	IUR $(ug/m^3)^{-1}$	IUR Ref	RfC (mg/m^3)	RfC Ref	Mutagenic Indicator	Carcinogenic VISL TCR=0.0001 $C_{ia,c}$ $(\mu g/m^3)$	Noncarcinogenic VISL THQ=0.1 $C_{ia,nc}$ $(\mu g/m^3)$
Acetone	U			3.09E+01	U	No		1.35E+04
Benzene	U	7.80E-06	U	3.00E-02	U	No	1.57E+02	1.31E+01
Butadiene, 1,3-	U	3.00E-05	U	2.00E-03	U	No	4.09E+01	8.76E-01
Carbon Disulfide	U			7.00E-01	U	No		3.07E+02
Chloroform		2.30E-05	U	9.77E-02	U	No	5.33E+01	4.28E+01
Cyclohexane	U			6.00E+00	U	No		2.63E+03
Dichlorodifluoromethane				1.00E-01	U	No		4.38E+01
Ethanol	U					No		
Ethylbenzene	U	2.50E-06	U	1.00E+00	U	No	4.91E+02	4.38E+02
Heptane, N-	U			4.00E-01	U	No		1.75E+02
Hexane, N-	U			7.00E-01	U	No		3.07E+02
Isopropanol	U			2.00E-01	U	No		8.76E+01
Methyl Ethyl Ketone (2-Butanone)	U			5.00E+00	U	No		2.19E+03
Tetrachloroethylene		2.60E-07	U	4.00E-02	U	No	4.72E+03	1.75E+01
Toluene	U			5.00E+00	U	No		2.19E+03
Trichloroethane, 1,1,1-	U			5.00E+00	U	No		2.19E+03
Trichloroethylene	U	4.10E-06	U	2.00E-03	U	Mut	2.99E+02	8.76E-01
Trichlorofluoromethane						No		
Trimethylbenzene, 1,2,4-	U			6.00E-02	U	No		2.63E+01
Trimethylbenzene, 1,3,5-	U			6.00E-02	U	No		2.63E+01
Xylene, o-	U			1.00E-01	U	No		4.38E+01

Chemical Properties
Output generated 13JUL2020:19:03:15

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	MW	MW Ref	Vapor Pressure VP (mm Hg)	VP Ref	S (mg/L)	S Ref	MCL (ug/L)	HLC (atm-m^3/mole)
Acetone	67-64-1	Yes	Yes	58.08	U	2.32E+02	U	1.00E+06	U		3.50E-05
Benzene	71-43-2	Yes	Yes	78.12	U	9.48E+01	U	1.79E+03	U	5	5.55E-03
Butadiene, 1,3-	106-99-0	Yes	Yes	54.09	U	2.11E+03	U	7.35E+02	U		7.36E-02
Carbon Disulfide	75-15-0	Yes	Yes	76.14	U	3.59E+02	U	2.16E+03	U		1.44E-02
Chloroform	67-66-3	Yes	Yes	119.38	U	1.97E+02	U	7.95E+03	U	80	3.67E-03
Cyclohexane	110-82-7	Yes	Yes	84.16	U	9.69E+01	U	5.50E+01	U		1.50E-01
Dichlorodifluoromethane	75-71-8	Yes	Yes	120.91	U	4.85E+03	U	2.80E+02	U		3.43E-01
Ethanol	64-17-5	Yes	No	46.07	U	5.93E+01	U	1.00E+06	U		5.00E-06
Ethylbenzene	100-41-4	Yes	Yes	106.17	U	9.60E+00	U	1.69E+02	U	700	7.88E-03
Heptane, N-	142-82-5	Yes	Yes	100.21	U	4.60E+01	U	3.40E+00	U		2.00E+00
Hexane, N-	110-54-3	Yes	Yes	86.18	U	1.51E+02	U	9.50E+00	U		1.80E+00
Isopropanol	67-63-0	Yes	Yes	60.10	U	4.54E+01	U	1.00E+06	U		8.10E-06
Methyl Ethyl Ketone (2-Butanone)	78-93-3	Yes	Yes	72.11	U	9.06E+01	U	2.23E+05	U		5.69E-05
Tetrachloroethylene	127-18-4	Yes	Yes	165.83	U	1.85E+01	U	2.06E+02	U	5	1.77E-02
Toluene	108-88-3	Yes	Yes	92.14	U	2.84E+01	U	5.26E+02	U	1000	6.64E-03
Trichloroethane, 1,1,1-	71-55-6	Yes	Yes	133.41	U	1.24E+02	U	1.29E+03	U	200	1.72E-02
Trichloroethylene	79-01-6	Yes	Yes	131.39	U	6.90E+01	U	1.28E+03	U	5	9.85E-03
Trichlorofluoromethane	75-69-4	Yes	No	137.37	U	8.03E+02	U	1.10E+03	U		9.70E-02
Trimethylbenzene, 1,2,4-	95-63-6	Yes	Yes	120.20	U	2.10E+00	U	5.70E+01	U		6.16E-03
Trimethylbenzene, 1,3,5-	108-67-8	Yes	Yes	120.20	U	2.48E+00	U	4.82E+01	U		8.77E-03
Xylene, o-	95-47-6	Yes	Yes	106.17	U	6.61E+00	U	1.78E+02	U		5.18E-03

Chemical	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref	Enthalpy of vaporization at the normal boiling point $\Delta H_{v,b}$\ (cal/mol)	$\Delta H_{v,b}$\ Ref	Lower Explosive Limit LEL (% by volume)	LEL Ref
Acetone	1.43E-03	U	1.43E-03	329.15	U	5.08E+02	U	6960.00	U	2.50	U
Benzene	2.27E-01	U	2.27E-01	353.15	U	5.62E+02	U	7340.00	U	1.20	U
Butadiene, 1,3-	3.01E+00	U	3.01E+00	268.75	U	4.25E+02	U	5370.00	U	2.00	U
Carbon Disulfide	5.89E-01	U	5.89E-01	319.15	U	5.52E+02	U	6390.00	U	1.30	U
Chloroform	1.50E-01	U	1.50E-01	334.25	U	5.36E+02	U	6990.00	U		
Cyclohexane	6.13E+00	U	6.13E+00	353.85	U	5.53E+02	U	7160.00	U	1.30	U
Dichlorodifluoromethane	1.40E+01	U	1.40E+01	243.35	U	3.85E+02	U	4800.00	U		
Ethanol	2.04E-04	U	2.04E-04	351.35	U	5.15E+02	U	9220.00	U	3.30	U
Ethylbenzene	3.22E-01	U	3.22E-01	409.15	U	6.17E+02	U	8500.00	U	0.80	U
Heptane, N-	8.18E+01	U	8.18E+01	371.65	U	5.40E+02	U	7590.00	U	1.05	U
Hexane, N-	7.36E+01	U	7.36E+01	341.85	U	5.08E+02	U	6900.00	U	1.10	U
Isopropanol	3.31E-04	U	3.31E-04	355.45	U	5.08E+02	U	10800.00	U	2.00	U
Methyl Ethyl Ketone (2-Butanone)	2.33E-03	U	2.33E-03	352.65	U	5.37E+02	U	7480.00	U	1.40	U
Tetrachloroethylene	7.24E-01	U	7.24E-01	394.15	U	6.20E+02	U	8290.00	U		
Toluene	2.71E-01	U	2.71E-01	384.15	U	5.92E+02	U	7930.00	U	1.10	U
Trichloroethane, 1,1,1-	7.03E-01	U	7.03E-01	347.15	U	5.45E+02	U	7140.00	U	8.00	U
Trichloroethylene	4.03E-01	U	4.03E-01	360.35	U	5.71E+02	U	7500.00	U	8.00	U
Trichlorofluoromethane	3.97E+00	U	3.97E+00	296.85	U	4.71E+02	U	6000.00	U		
Trimethylbenzene, 1,2,4-	2.52E-01	U	2.52E-01	442.15	U	6.49E+02	U	9370.00	U	0.90	U
Trimethylbenzene, 1,3,5-	3.59E-01	U	3.59E-01	438.15	U	6.37E+02	U	9320.00	U	1.00	U
Xylene, o-	2.12E-01	U	2.12E-01	417.15	U	6.30E+02	U	8660.00	U	0.90	U

Site-specific VISL Results
Commercial Equation Inputs

*** Inputted values different from Commercial defaults are highlighted.**
Output generated 13JUL2020:18:55:22

Variable	Commercial Air Default Value	Form-input Value
AF_{gw} (Attenuation Factor Groundwater) unitless	0.001	0.001
AF_{ss} (Attenuation Factor Sub-Slab) unitless	0.03	0.03
AT_{w} (averaging time - composite worker)	365	365
ED_{w} (exposure duration - composite worker) yr	25	25
EF_{w} (exposure frequency - composite worker) day/yr	250	250
ET_{w} (exposure time - composite worker) hr	8	8
THQ (target hazard quotient) unitless	0.1	0.1
LT (lifetime) yr	70	70
TR (target risk) unitless	1.0E-06	1.0E-05

Commercial Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source? (C_{vp} > $C_{i,a}$,Target?)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source? (C_{hc} > $C_{i,a}$,Target?)	Target Indoor Air Concentration (TCR=1E-05 or THQ=0.1) MIN($C_{ia,c}$,$C_{ia,nc}$) ($\mu g/m^3$)	Toxicity Basis
Acetone	67-64-1	Yes	Yes	Yes	Yes	1.35E+04	NC
Benzene	71-43-2	Yes	Yes	Yes	Yes	1.31E+01	NC
Butadiene, 1,3-	106-99-0	Yes	Yes	Yes	Yes	8.76E-01	NC
Carbon Disulfide	75-15-0	Yes	Yes	Yes	Yes	3.07E+02	NC
Chloroform	67-66-3	Yes	Yes	Yes	Yes	5.33E+00	CA
Cyclohexane	110-82-7	Yes	Yes	Yes	Yes	2.63E+03	NC
Dichlorodifluoromethane	75-71-8	Yes	Yes	Yes	Yes	4.38E+01	NC
Ethanol	64-17-5	Yes	No	No Inhal. Tox. Info	No Inhal. Tox. Info		
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	4.91E+01	CA
Heptane, N-	142-82-5	Yes	Yes	Yes	Yes	1.75E+02	NC
Hexane, N-	110-54-3	Yes	Yes	Yes	Yes	3.07E+02	NC
Isopropanol	67-63-0	Yes	Yes	Yes	Yes	8.76E+01	NC
Methyl Ethyl Ketone (2-Butanone)	78-93-3	Yes	Yes	Yes	Yes	2.19E+03	NC
Tetrachloroethylene	127-18-4	Yes	Yes	Yes	Yes	1.75E+01	NC
Toluene	108-88-3	Yes	Yes	Yes	Yes	2.19E+03	NC
Trichloroethane, 1,1,1-	71-55-6	Yes	Yes	Yes	Yes	2.19E+03	NC
Trichloroethylene	79-01-6	Yes	Yes	Yes	Yes	8.76E-01	NC
Trichlorofluoromethane	75-69-4	Yes	No	No Inhal. Tox. Info	No Inhal. Tox. Info		
Trimethylbenzene, 1,2,4-	95-63-6	Yes	Yes	Yes	Yes	2.63E+01	NC
Trimethylbenzene, 1,3,5-	108-67-8	Yes	Yes	Yes	Yes	2.63E+01	NC
Xylene, o-	95-47-6	Yes	Yes	Yes	Yes	4.38E+01	NC

Commercial Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	Target Sub-Slab and Near-source Soil Gas Concentration (TCR=1E-05 or THQ=0.1) C_{sg},Target (µg/m³)	Target Groundwater Concentration (TCR=1E-05 or THQ=0.1) C_{gw},Target (µg/L)	Is Target Groundwater Concentration < MCL? (C_{gw} < MCL?)	Pure Phase Vapor Concentration C_{vp}\ (25 ℃)\ (µg/m³)	Maximum Groundwater Vapor Concentration C_{hc}\ (µg/m³)	Temperature for Maximum Groundwater Vapor Concentration (℃)	Lower Explosive Limit LEL (% by volume)
Acetone	4.51E+05	9.46E+06	--	7.25E+08	1.43E+09	25	2.50
Benzene	4.38E+02	5.79E+01	No (5)	3.98E+08	4.06E+08	25	1.20
Butadiene, 1,3-	2.92E+01	2.91E-01	--	6.14E+09	2.21E+09	25	2.00
Carbon Disulfide	1.02E+04	5.21E+02	--	1.47E+09	1.27E+09	25	1.30
Chloroform	1.78E+02	3.55E+01	Yes (80)	1.26E+09	1.19E+09	25	
Cyclohexane	8.76E+04	4.29E+02	--	4.39E+08	3.37E+08	25	1.30
Dichlorodifluoromethane	1.46E+03	3.12E+00	--	3.15E+10	3.93E+09	25	
Ethanol				1.47E+08	2.04E+08	25	3.30
Ethylbenzene	1.64E+03	1.52E+02	Yes (700)	5.48E+07	5.44E+07	25	0.80
Heptane, N-	5.84E+03	2.14E+00	--	2.48E+08	2.78E+08	25	1.05
Hexane, N-	1.02E+04	4.17E+00	--	7.00E+08	6.99E+08	25	1.10
Isopropanol	2.92E+03	2.65E+05	--	1.47E+08	3.31E+08	25	2.00
Methyl Ethyl Ketone (2-Butanone)	7.30E+04	9.41E+05	--	3.51E+08	5.19E+08	25	1.40
Tetrachloroethylene	5.84E+02	2.42E+01	No (5)	1.65E+08	1.49E+08	25	
Toluene	7.30E+04	8.07E+03	No (1000)	1.41E+08	1.43E+08	25	1.10
Trichloroethane, 1,1,1-	7.30E+04	3.11E+03	No (200)	8.90E+08	9.07E+08	25	8.00
Trichloroethylene	2.92E+01	2.18E+00	Yes (5)	4.88E+08	5.15E+08	25	8.00
Trichlorofluoromethane				5.93E+09	4.36E+09	25	
Trimethylbenzene, 1,2,4-	8.76E+02	1.04E+02	--	1.36E+07	1.44E+07	25	0.90
Trimethylbenzene, 1,3,5-	8.76E+02	7.33E+01	--	1.60E+07	1.73E+07	25	1.00
Xylene, o-	1.46E+03	2.07E+02	--	3.77E+07	3.77E+07	25	0.90

Commercial Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	LEL Ref	IUR $(ug/m^3)^{-1}$	IUR Ref	RfC (mg/m^3)	RfC Ref	Mutagenic Indicator	Carcinogenic VISL TCR=1E-05 $C_{ia,c}$ $(\mu g/m^3)$	Noncarcinogenic VISL THQ=0.1 $C_{ia,nc}$ $(\mu g/m^3)$
Acetone	U			3.09E+01	U	No		1.35E+04
Benzene	U	7.80E-06	U	3.00E-02	U	No	1.57E+01	1.31E+01
Butadiene, 1,3-	U	3.00E-05	U	2.00E-03	U	No	4.09E+00	8.76E-01
Carbon Disulfide	U			7.00E-01	U	No		3.07E+02
Chloroform		2.30E-05	U	9.77E-02	U	No	5.33E+00	4.28E+01
Cyclohexane	U			6.00E+00	U	No		2.63E+03
Dichlorodifluoromethane				1.00E-01	U	No		4.38E+01
Ethanol	U					No		
Ethylbenzene	U	2.50E-06	U	1.00E+00	U	No	4.91E+01	4.38E+02
Heptane, N-	U			4.00E-01	U	No		1.75E+02
Hexane, N-	U			7.00E-01	U	No		3.07E+02
Isopropanol	U			2.00E-01	U	No		8.76E+01
Methyl Ethyl Ketone (2-Butanone)	U			5.00E+00	U	No		2.19E+03
Tetrachloroethylene		2.60E-07	U	4.00E-02	U	No	4.72E+02	1.75E+01
Toluene	U			5.00E+00	U	No		2.19E+03
Trichloroethane, 1,1,1-	U			5.00E+00	U	No		2.19E+03
Trichloroethylene	U	4.10E-06	U	2.00E-03	U	Mut	2.99E+01	8.76E-01
Trichlorofluoromethane						No		
Trimethylbenzene, 1,2,4-	U			6.00E-02	U	No		2.63E+01
Trimethylbenzene, 1,3,5-	U			6.00E-02	U	No		2.63E+01
Xylene, o-	U			1.00E-01	U	No		4.38E+01

Chemical Properties
Output generated 13JUL2020:18:55:22

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	MW	MW Ref	Vapor Pressure VP (mm Hg)	VP Ref	S (mg/L)	S Ref	MCL (ug/L)	HLC (atm-m^3/mole)
Acetone	67-64-1	Yes	Yes	58.08	U	2.32E+02	U	1.00E+06	U		3.50E-05
Benzene	71-43-2	Yes	Yes	78.12	U	9.48E+01	U	1.79E+03	U	5	5.55E-03
Butadiene, 1,3-	106-99-0	Yes	Yes	54.09	U	2.11E+03	U	7.35E+02	U		7.36E-02
Carbon Disulfide	75-15-0	Yes	Yes	76.14	U	3.59E+02	U	2.16E+03	U		1.44E-02
Chloroform	67-66-3	Yes	Yes	119.38	U	1.97E+02	U	7.95E+03	U	80	3.67E-03
Cyclohexane	110-82-7	Yes	Yes	84.16	U	9.69E+01	U	5.50E+01	U		1.50E-01
Dichlorodifluoromethane	75-71-8	Yes	Yes	120.91	U	4.85E+03	U	2.80E+02	U		3.43E-01
Ethanol	64-17-5	Yes	No	46.07	U	5.93E+01	U	1.00E+06	U		5.00E-06
Ethylbenzene	100-41-4	Yes	Yes	106.17	U	9.60E+00	U	1.69E+02	U	700	7.88E-03
Heptane, N-	142-82-5	Yes	Yes	100.21	U	4.60E+01	U	3.40E+00	U		2.00E+00
Hexane, N-	110-54-3	Yes	Yes	86.18	U	1.51E+02	U	9.50E+00	U		1.80E+00
Isopropanol	67-63-0	Yes	Yes	60.10	U	4.54E+01	U	1.00E+06	U		8.10E-06
Methyl Ethyl Ketone (2-Butanone)	78-93-3	Yes	Yes	72.11	U	9.06E+01	U	2.23E+05	U		5.69E-05
Tetrachloroethylene	127-18-4	Yes	Yes	165.83	U	1.85E+01	U	2.06E+02	U	5	1.77E-02
Toluene	108-88-3	Yes	Yes	92.14	U	2.84E+01	U	5.26E+02	U	1000	6.64E-03
Trichloroethane, 1,1,1-	71-55-6	Yes	Yes	133.41	U	1.24E+02	U	1.29E+03	U	200	1.72E-02
Trichloroethylene	79-01-6	Yes	Yes	131.39	U	6.90E+01	U	1.28E+03	U	5	9.85E-03
Trichlorofluoromethane	75-69-4	Yes	No	137.37	U	8.03E+02	U	1.10E+03	U		9.70E-02
Trimethylbenzene, 1,2,4-	95-63-6	Yes	Yes	120.20	U	2.10E+00	U	5.70E+01	U		6.16E-03
Trimethylbenzene, 1,3,5-	108-67-8	Yes	Yes	120.20	U	2.48E+00	U	4.82E+01	U		8.77E-03
Xylene, o-	95-47-6	Yes	Yes	106.17	U	6.61E+00	U	1.78E+02	U		5.18E-03

Chemical	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref	Enthalpy of vaporization at the normal boiling point $\Delta H_{v,b}$\ (cal/mol)	$\Delta H_{v,b}$\ Ref	Lower Explosive Limit LEL (% by volume)	LEL Ref
Acetone	1.43E-03	U	1.43E-03	329.15	U	5.08E+02	U	6960.00	U	2.50	U
Benzene	2.27E-01	U	2.27E-01	353.15	U	5.62E+02	U	7340.00	U	1.20	U
Butadiene, 1,3-	3.01E+00	U	3.01E+00	268.75	U	4.25E+02	U	5370.00	U	2.00	U
Carbon Disulfide	5.89E-01	U	5.89E-01	319.15	U	5.52E+02	U	6390.00	U	1.30	U
Chloroform	1.50E-01	U	1.50E-01	334.25	U	5.36E+02	U	6990.00	U		
Cyclohexane	6.13E+00	U	6.13E+00	353.85	U	5.53E+02	U	7160.00	U	1.30	U
Dichlorodifluoromethane	1.40E+01	U	1.40E+01	243.35	U	3.85E+02	U	4800.00	U		
Ethanol	2.04E-04	U	2.04E-04	351.35	U	5.15E+02	U	9220.00	U	3.30	U
Ethylbenzene	3.22E-01	U	3.22E-01	409.15	U	6.17E+02	U	8500.00	U	0.80	U
Heptane, N-	8.18E+01	U	8.18E+01	371.65	U	5.40E+02	U	7590.00	U	1.05	U
Hexane, N-	7.36E+01	U	7.36E+01	341.85	U	5.08E+02	U	6900.00	U	1.10	U
Isopropanol	3.31E-04	U	3.31E-04	355.45	U	5.08E+02	U	10800.00	U	2.00	U
Methyl Ethyl Ketone (2-Butanone)	2.33E-03	U	2.33E-03	352.65	U	5.37E+02	U	7480.00	U	1.40	U
Tetrachloroethylene	7.24E-01	U	7.24E-01	394.15	U	6.20E+02	U	8290.00	U		
Toluene	2.71E-01	U	2.71E-01	384.15	U	5.92E+02	U	7930.00	U	1.10	U
Trichloroethane, 1,1,1-	7.03E-01	U	7.03E-01	347.15	U	5.45E+02	U	7140.00	U	8.00	U
Trichloroethylene	4.03E-01	U	4.03E-01	360.35	U	5.71E+02	U	7500.00	U	8.00	U
Trichlorofluoromethane	3.97E+00	U	3.97E+00	296.85	U	4.71E+02	U	6000.00	U		
Trimethylbenzene, 1,2,4-	2.52E-01	U	2.52E-01	442.15	U	6.49E+02	U	9370.00	U	0.90	U
Trimethylbenzene, 1,3,5-	3.59E-01	U	3.59E-01	438.15	U	6.37E+02	U	9320.00	U	1.00	U
Xylene, o-	2.12E-01	U	2.12E-01	417.15	U	6.30E+02	U	8660.00	U	0.90	U

Site-specific VISL Results
Commercial Equation Inputs

*** Inputted values different from Commercial defaults are highlighted.**
Output generated 13JUL2020:18:50:10

Variable	Commercial Air Default Value	Form-input Value
AF_{gw} (Attenuation Factor Groundwater) unitless	0.001	0.001
AF_{ss} (Attenuation Factor Sub-Slab) unitless	0.03	0.03
AT_{w} (averaging time - composite worker)	365	365
ED_{w} (exposure duration - composite worker) yr	25	25
EF_{w} (exposure frequency - composite worker) day/yr	250	250
ET_{w} (exposure time - composite worker) hr	8	8
THQ (target hazard quotient) unitless	0.1	0.1
LT (lifetime) yr	70	70
TR (target risk) unitless	1.0E-06	1.0E-06

Commercial Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source? ($C_{vp} > C_{i,a}$,Target?)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source? ($C_{hc} > C_{i,a}$,Target?)	Target Indoor Air Concentration (TCR=1E-06 or THQ=0.1) MIN($C_{ia,c}$,$C_{ia,nc}$) ($\mu g/m^3$)	Toxicity Basis
Acetone	67-64-1	Yes	Yes	Yes	Yes	1.35E+04	NC
Benzene	71-43-2	Yes	Yes	Yes	Yes	1.57E+00	CA
Butadiene, 1,3-	106-99-0	Yes	Yes	Yes	Yes	4.09E-01	CA
Carbon Disulfide	75-15-0	Yes	Yes	Yes	Yes	3.07E+02	NC
Chloroform	67-66-3	Yes	Yes	Yes	Yes	5.33E-01	CA
Cyclohexane	110-82-7	Yes	Yes	Yes	Yes	2.63E+03	NC
Dichlorodifluoromethane	75-71-8	Yes	Yes	Yes	Yes	4.38E+01	NC
Ethanol	64-17-5	Yes	No	No Inhal. Tox. Info	No Inhal. Tox. Info		
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	4.91E+00	CA
Heptane, N-	142-82-5	Yes	Yes	Yes	Yes	1.75E+02	NC
Hexane, N-	110-54-3	Yes	Yes	Yes	Yes	3.07E+02	NC
Isopropanol	67-63-0	Yes	Yes	Yes	Yes	8.76E+01	NC
Methyl Ethyl Ketone (2-Butanone)	78-93-3	Yes	Yes	Yes	Yes	2.19E+03	NC
Tetrachloroethylene	127-18-4	Yes	Yes	Yes	Yes	1.75E+01	NC
Toluene	108-88-3	Yes	Yes	Yes	Yes	2.19E+03	NC
Trichloroethane, 1,1,1-	71-55-6	Yes	Yes	Yes	Yes	2.19E+03	NC
Trichloroethylene	79-01-6	Yes	Yes	Yes	Yes	8.76E-01	NC
Trichlorofluoromethane	75-69-4	Yes	No	No Inhal. Tox. Info	No Inhal. Tox. Info		
Trimethylbenzene, 1,2,4-	95-63-6	Yes	Yes	Yes	Yes	2.63E+01	NC
Trimethylbenzene, 1,3,5-	108-67-8	Yes	Yes	Yes	Yes	2.63E+01	NC
Xylene, o-	95-47-6	Yes	Yes	Yes	Yes	4.38E+01	NC

Commercial Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	Target Sub-Slab and Near-source Soil Gas Concentration (TCR=1E-06 or THQ=0.1) C_{sg},Target (µg/m³)	Target Groundwater Concentration (TCR=1E-06 or THQ=0.1) C_{gw},Target (µg/L)	Is Target Groundwater Concentration < MCL? (C_{gw} < MCL?)	Pure Phase Vapor Concentration C_{vp}\ (25 ℃)\ (µg/m³)	Maximum Groundwater Vapor Concentration C_{hc}\ (µg/m³)	Temperature for Maximum Groundwater Vapor Concentration (℃)	Lower Explosive Limit LEL (% by volume)
Acetone	4.51E+05	9.46E+06	--	7.25E+08	1.43E+09	25	2.50
Benzene	5.24E+01	6.93E+00	No (5)	3.98E+08	4.06E+08	25	1.20
Butadiene, 1,3-	1.36E+01	1.36E-01	--	6.14E+09	2.21E+09	25	2.00
Carbon Disulfide	1.02E+04	5.21E+02	--	1.47E+09	1.27E+09	25	1.30
Chloroform	1.78E+01	3.55E+00	Yes (80)	1.26E+09	1.19E+09	25	
Cyclohexane	8.76E+04	4.29E+02	--	4.39E+08	3.37E+08	25	1.30
Dichlorodifluoromethane	1.46E+03	3.12E+00	--	3.15E+10	3.93E+09	25	
Ethanol				1.47E+08	2.04E+08	25	3.30
Ethylbenzene	1.64E+02	1.52E+01	Yes (700)	5.48E+07	5.44E+07	25	0.80
Heptane, N-	5.84E+03	2.14E+00	--	2.48E+08	2.78E+08	25	1.05
Hexane, N-	1.02E+04	4.17E+00	--	7.00E+08	6.99E+08	25	1.10
Isopropanol	2.92E+03	2.65E+05	--	1.47E+08	3.31E+08	25	2.00
Methyl Ethyl Ketone (2-Butanone)	7.30E+04	9.41E+05	--	3.51E+08	5.19E+08	25	1.40
Tetrachloroethylene	5.84E+02	2.42E+01	No (5)	1.65E+08	1.49E+08	25	
Toluene	7.30E+04	8.07E+03	No (1000)	1.41E+08	1.43E+08	25	1.10
Trichloroethane, 1,1,1-	7.30E+04	3.11E+03	No (200)	8.90E+08	9.07E+08	25	8.00
Trichloroethylene	2.92E+01	2.18E+00	Yes (5)	4.88E+08	5.15E+08	25	8.00
Trichlorofluoromethane				5.93E+09	4.36E+09	25	
Trimethylbenzene, 1,2,4-	8.76E+02	1.04E+02	--	1.36E+07	1.44E+07	25	0.90
Trimethylbenzene, 1,3,5-	8.76E+02	7.33E+01	--	1.60E+07	1.73E+07	25	1.00
Xylene, o-	1.46E+03	2.07E+02	--	3.77E+07	3.77E+07	25	0.90

Commercial Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	LEL Ref	IUR $(ug/m^3)^{-1}$	IUR Ref	RfC (mg/m^3)	RfC Ref	Mutagenic Indicator	Carcinogenic VISL TCR=1E-06 $C_{ia,c}$ $(\mu g/m^3)$	Noncarcinogenic VISL THQ=0.1 $C_{ia,nc}$ $(\mu g/m^3)$
Acetone	U			3.09E+01	U	No		1.35E+04
Benzene	U	7.80E-06	U	3.00E-02	U	No	1.57E+00	1.31E+01
Butadiene, 1,3-	U	3.00E-05	U	2.00E-03	U	No	4.09E-01	8.76E-01
Carbon Disulfide	U			7.00E-01	U	No		3.07E+02
Chloroform		2.30E-05	U	9.77E-02	U	No	5.33E-01	4.28E+01
Cyclohexane	U			6.00E+00	U	No		2.63E+03
Dichlorodifluoromethane				1.00E-01	U	No		4.38E+01
Ethanol	U					No		
Ethylbenzene	U	2.50E-06	U	1.00E+00	U	No	4.91E+00	4.38E+02
Heptane, N-	U			4.00E-01	U	No		1.75E+02
Hexane, N-	U			7.00E-01	U	No		3.07E+02
Isopropanol	U			2.00E-01	U	No		8.76E+01
Methyl Ethyl Ketone (2-Butanone)	U			5.00E+00	U	No		2.19E+03
Tetrachloroethylene		2.60E-07	U	4.00E-02	U	No	4.72E+01	1.75E+01
Toluene	U			5.00E+00	U	No		2.19E+03
Trichloroethane, 1,1,1-	U			5.00E+00	U	No		2.19E+03
Trichloroethylene	U	4.10E-06	U	2.00E-03	U	Mut	2.99E+00	8.76E-01
Trichlorofluoromethane						No		
Trimethylbenzene, 1,2,4-	U			6.00E-02	U	No		2.63E+01
Trimethylbenzene, 1,3,5-	U			6.00E-02	U	No		2.63E+01
Xylene, o-	U			1.00E-01	U	No		4.38E+01

Chemical Properties
Output generated 13JUL2020:18:50:10

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	MW	MW Ref	Vapor Pressure VP (mm Hg)	VP Ref	S (mg/L)	S Ref	MCL (ug/L)	HLC (atm-m^3/mole)
Acetone	67-64-1	Yes	Yes	58.08	U	2.32E+02	U	1.00E+06	U		3.50E-05
Benzene	71-43-2	Yes	Yes	78.12	U	9.48E+01	U	1.79E+03	U	5	5.55E-03
Butadiene, 1,3-	106-99-0	Yes	Yes	54.09	U	2.11E+03	U	7.35E+02	U		7.36E-02
Carbon Disulfide	75-15-0	Yes	Yes	76.14	U	3.59E+02	U	2.16E+03	U		1.44E-02
Chloroform	67-66-3	Yes	Yes	119.38	U	1.97E+02	U	7.95E+03	U	80	3.67E-03
Cyclohexane	110-82-7	Yes	Yes	84.16	U	9.69E+01	U	5.50E+01	U		1.50E-01
Dichlorodifluoromethane	75-71-8	Yes	Yes	120.91	U	4.85E+03	U	2.80E+02	U		3.43E-01
Ethanol	64-17-5	Yes	No	46.07	U	5.93E+01	U	1.00E+06	U		5.00E-06
Ethylbenzene	100-41-4	Yes	Yes	106.17	U	9.60E+00	U	1.69E+02	U	700	7.88E-03
Heptane, N-	142-82-5	Yes	Yes	100.21	U	4.60E+01	U	3.40E+00	U		2.00E+00
Hexane, N-	110-54-3	Yes	Yes	86.18	U	1.51E+02	U	9.50E+00	U		1.80E+00
Isopropanol	67-63-0	Yes	Yes	60.10	U	4.54E+01	U	1.00E+06	U		8.10E-06
Methyl Ethyl Ketone (2-Butanone)	78-93-3	Yes	Yes	72.11	U	9.06E+01	U	2.23E+05	U		5.69E-05
Tetrachloroethylene	127-18-4	Yes	Yes	165.83	U	1.85E+01	U	2.06E+02	U	5	1.77E-02
Toluene	108-88-3	Yes	Yes	92.14	U	2.84E+01	U	5.26E+02	U	1000	6.64E-03
Trichloroethane, 1,1,1-	71-55-6	Yes	Yes	133.41	U	1.24E+02	U	1.29E+03	U	200	1.72E-02
Trichloroethylene	79-01-6	Yes	Yes	131.39	U	6.90E+01	U	1.28E+03	U	5	9.85E-03
Trichlorofluoromethane	75-69-4	Yes	No	137.37	U	8.03E+02	U	1.10E+03	U		9.70E-02
Trimethylbenzene, 1,2,4-	95-63-6	Yes	Yes	120.20	U	2.10E+00	U	5.70E+01	U		6.16E-03
Trimethylbenzene, 1,3,5-	108-67-8	Yes	Yes	120.20	U	2.48E+00	U	4.82E+01	U		8.77E-03
Xylene, o-	95-47-6	Yes	Yes	106.17	U	6.61E+00	U	1.78E+02	U		5.18E-03

Chemical	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref	Enthalpy of vaporization at the normal boiling point $\Delta H_{v,b}$\ (cal/mol)	$\Delta H_{v,b}$\ Ref	Lower Explosive Limit LEL (% by volume)	LEL Ref
Acetone	1.43E-03	U	1.43E-03	329.15	U	5.08E+02	U	6960.00	U	2.50	U
Benzene	2.27E-01	U	2.27E-01	353.15	U	5.62E+02	U	7340.00	U	1.20	U
Butadiene, 1,3-	3.01E+00	U	3.01E+00	268.75	U	4.25E+02	U	5370.00	U	2.00	U
Carbon Disulfide	5.89E-01	U	5.89E-01	319.15	U	5.52E+02	U	6390.00	U	1.30	U
Chloroform	1.50E-01	U	1.50E-01	334.25	U	5.36E+02	U	6990.00	U		
Cyclohexane	6.13E+00	U	6.13E+00	353.85	U	5.53E+02	U	7160.00	U	1.30	U
Dichlorodifluoromethane	1.40E+01	U	1.40E+01	243.35	U	3.85E+02	U	4800.00	U		
Ethanol	2.04E-04	U	2.04E-04	351.35	U	5.15E+02	U	9220.00	U	3.30	U
Ethylbenzene	3.22E-01	U	3.22E-01	409.15	U	6.17E+02	U	8500.00	U	0.80	U
Heptane, N-	8.18E+01	U	8.18E+01	371.65	U	5.40E+02	U	7590.00	U	1.05	U
Hexane, N-	7.36E+01	U	7.36E+01	341.85	U	5.08E+02	U	6900.00	U	1.10	U
Isopropanol	3.31E-04	U	3.31E-04	355.45	U	5.08E+02	U	10800.00	U	2.00	U
Methyl Ethyl Ketone (2-Butanone)	2.33E-03	U	2.33E-03	352.65	U	5.37E+02	U	7480.00	U	1.40	U
Tetrachloroethylene	7.24E-01	U	7.24E-01	394.15	U	6.20E+02	U	8290.00	U		
Toluene	2.71E-01	U	2.71E-01	384.15	U	5.92E+02	U	7930.00	U	1.10	U
Trichloroethane, 1,1,1-	7.03E-01	U	7.03E-01	347.15	U	5.45E+02	U	7140.00	U	8.00	U
Trichloroethylene	4.03E-01	U	4.03E-01	360.35	U	5.71E+02	U	7500.00	U	8.00	U
Trichlorofluoromethane	3.97E+00	U	3.97E+00	296.85	U	4.71E+02	U	6000.00	U		
Trimethylbenzene, 1,2,4-	2.52E-01	U	2.52E-01	442.15	U	6.49E+02	U	9370.00	U	0.90	U
Trimethylbenzene, 1,3,5-	3.59E-01	U	3.59E-01	438.15	U	6.37E+02	U	9320.00	U	1.00	U
Xylene, o-	2.12E-01	U	2.12E-01	417.15	U	6.30E+02	U	8660.00	U	0.90	U

APPENDIX E: NYSDOH SOIL VAPOR/INDOOR AIR MATRICES

PSG

Soil Vapor/Indoor Air Matrix A

May 2017

Analytes Assigned:
Trichloroethene (TCE), *cis*-1,2-Dichloroethene (*c*12-DCE), 1,1-Dichloroethene (11-DCE), Carbon Tetrachloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 0.2	0.2 to < 1	1 and above
< 6	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	4. No further action	5. MONITOR	6. MITIGATE
60 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX A

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix B

May 2017

Analytes Assigned:
Tetrachloroethene (PCE), 1,1,1-Trichloroethane (111-TCA), Methylene Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 3	3 to < 10	10 and above
< 100	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
100 to < 1,000	4. No further action	5. MONITOR	6. MITIGATE
1,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX B

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix C

May 2017

Analytes Assigned:
Vinyl Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)	
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 0.2	0.2 and above
< 6	1. No further action	2. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	3. MONITOR	4. MITIGATE
60 and above	5. MITIGATE	6. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX C

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.